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**YEAR-BOOK**  
**OF THE**  
**ROYAL ASIATIC SOCIETY OF BENGAL**  
**VOLUME I**  
**1935**



**PRINTED AT THE BAPTIST MISSION PRESS**  
**PUBLISHED BY THE ROYAL ASIATIC SOCIETY OF BENGAL**

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**CALCUTTA**  
**1936**



**YEAR-BOOK**  
**OF THE**  
**ASIATIC SOCIETY OF BENGAL**

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**VOLUME I.**

**1935**



## NOTICE.

For the convenience of the readers, enabling them to preserve and to bind separately the literary and scientific material, the *Journal and Proceedings of the Asiatic Society of Bengal* will from 1935 be issued in three separate parts, each with its own title, page numbering, and index.

The titles of the three parts will be :—

**Journal of the Asiatic Society of Bengal. Letters.**  
**Journal of the Asiatic Society of Bengal. Science.**  
**Year-Book of the Asiatic Society of Bengal.**

The *Year-Book* will contain the matter hitherto published in the *Proceedings* of the Society.

The following abbreviations are recommended for use in references: JASBL.; JASBSc.; and YBASB.

The volume and year numbers will be the same for the three parts of the *Journal*.

The new form of issue will constitute a third series of the *Journal* of which the history is as follows :—

First Series (1)	Journal,	Vols. 1-73, 1832-1904.
(2)	Proceedings,	Vols. 1-40, 1865-1904.
New (i.e. Second) Series	Journal and Proceedings,	Vols. 1-30, 1905-1934.
Third Series (1)	Journal. Letters,	Vol. 1- , 1935- .
(2)	Journal. Science,	Vol. 1- , 1935- .
(3)	Year-Book,	Vol. 1- , 1935- .

CALCUTTA,  
 1, PARK STREET,  
 January, 1935.

JOHAN VAN MANEN,  
*General Secretary,*  
*Asiatic Society of Bengal.*



# Year-Book, Asiatic Society of Bengal, 1934.

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# PROCEEDINGS OF THE ANNUAL MEETING, 1935.

## FEBRUARY.

The Annual Meeting of the Asiatic Society of Bengal was held on Monday, the 4th February, 1935, at 5-30 p.m.

### PRESENT.

L. L. FERMOB, ESQ., O.B.E., A.R.S.M., D.Sc., F.G.S.,  
M.INST.M.M., F.R.S., F.A.S.B., President, in the Chair.

#### Members :

Agharkar, Dr. S. P.	Ghosal, Dr. U. N.
Basu, Mr. N. M.	Haq, Mr. M. Mahfuz-ul
Bent, Mr. W. A.	Hobbs, Mr. H.
Benthall, Sir Edward	Holme, Mr. J. W.
Biswas, Mr. K.	Hora, Dr. S. L.
Bogdanov, Mr. L.	Hossain, Dr. M. Hidayat
Brahmachari, Dr. P. N.	Jain, Mr. C. L.
Brahmachari, Sir U. N.	Jenkins, Dr. W. A.
Brahmachary, Rai Bahadur S. C.	Kavyatirtha, Pt. R. D.
Brown, Mr. Percy	Knowles, Lt.-Col. R.
Caldar, Mr. C. C.	Kramrisch, Dr. Stella
Chakladar, Mr. H. C.	Krishnan, Dr. K. S.
Chakravarti, Mr. Chintaharan	Krishnan, Dr. M. S.
Chatterjee, Mr. P. P.	Ledrus, Rev. M., S.J.
Chatterji, Dr. S. C.	Manen. Mr. Johan van
Chatterji, Dr. S. K.	Mitra, Mr. M. N.
Darbari, Mr. M. D.	Mitter, The Hon'ble Sir B. L.
Datta, Dr. H. N.	Mukherjee, Dr. J. N.
Dob, Raja K., Rai Mahasaya of	Mukherjee, Dr. S. C.
Bansberia Raj.	Pasricha, Capt. C. L.
Dikshit, Mr. K. N.	Rahman, Mr. S. K.
Driver, Mr. D. C.	Rao, Mr. U. Shankar
Duncan, Mr. P. C.	Wadia, Mr. D. N.
Ezra, Sir David	Wilson, Dr. H. E. C.

and others.

#### Visitors :

Acharji, Mr. M. N.	Datta, Mr. M. N.
Banerjee, Mr. S. N.	De, Mrs.
Bhaduri, Mr. J.	Dubois, Mons. P.
Bhattacharya, Mr. Bhabatosh	Ellis, Mr. N. A.
Bird, Mrs. M. E. C.	Ezra, Lady
Bose, Mr. J. K.	Fermor, Mrs.
Brahmachari, Mr. S. C.	Gan, Mr. J. K.
Brown, Mrs. P.	Ghose, Mr. D. C.
Chhabra, Mr. B. Ch.	Groth, Mr. E. M.
Chatterjee, Mr. A. C.	Gunning, Mr. C. S.
Chatterjee, Mrs. S. C.	Haider, Mrs. G. L.
Countts, Mrs. M. E.	Heaney, Mr. G. F.
Das, Mr. K. N.	Jack, The Hon'ble Mr. Justice R. E.
Das-Gupta, Mr. C. C.	Knight, Rev. P.

Knight, Mrs.  
 Matthews, Mr. B.  
 Mukherjee, Mr. D. D.  
 Mukherjee, Mr. J. C.  
 Mukherjee, Mrs.  
 Nag, Mr. K. C.  
 Nag, Mrs.  
 Narayanaswami, Mr. V.  
 Phillimore, Col. R. D.

Prashad, Dr. Ganesh  
 Renot, Mr. A. D.  
 Sarkar, Sir Jadunath  
 Schelvis, Rev. A., S.J.  
 Sen. Mr. B. M.  
 Sen, Mrs.  
 Stanley, Mrs. F.  
 Turbett, Capt. L. W. R. T.  
 Turbett, Mrs.  
 Wilkinson, Mr. H. R.

and others.

The President in declaring the Annual Meeting open said :—

‘LADIES AND GENTLEMEN,

I have to my regret to announce that H.E. the Governor of Bengal, our Patron, is prevented from attending our Annual Meeting on account of absence from Calcutta. He has, however, expressed his good wishes for the success of our function and it is my pleasant duty to communicate this message to you.’

The President ordered the distribution of the voting papers for the election of Officers and Members of Council for 1935, and appointed Messrs. H. Hobbs and L. Bogdanov to be scrutineers.

The President ordered the distribution of copies of the Annual Report for 1934 and called on the General Secretary to present it to the meeting.

The Annual Report was then presented. (See page 36).

The retiring President then delivered his Annual Address. (See page 9).

The President called upon the scrutineers to report and announced the result of the Council Election. (See page 23).

The President for 1935 then briefly thanked the Society for his re-election, as follows :—

‘LADIES AND GENTLEMEN,

I have to thank you most heartily for the honour you have done me by re-electing me your President for the ensuing year.

I will add no words other than those necessary to say that it will be my strenuous endeavour during the new year to serve the Society so that its usefulness, its renown and its influence may grow, and so that the cause of learning in this land and beyond its borders may be truly promoted.’

The President for 1935 then made the following announcement :—

‘On the date prescribed by the regulations for the issue of nomination papers for the election of new Fellows for the year, there were no vacancies on the list, consequently, no election of Fellows has taken place this year.’

'I have next to announce that papers from two candidates have been received in competition for the Elliott Prize for Scientific Research for the year 1933, and the Trustees have judged the papers of one candidate deserving of the award.

The prize for the year is accordingly awarded to Mr. Nirmal Kumar Sen of Dacca University for meritorious publications on the subject of Chemistry.

The prize for 1934 has been for Physics. Papers from one candidate only have been received in competition for the prize; and the Trustees have judged those papers deserving of the award.

The prize for the year is accordingly awarded to Dr. D. P. Roy-Chaudhury of the University College of Science, Calcutta, for meritorious publications on the subject of Physics.

The prize for 1935 will be for work in Geology and Biology (including Pathology and Physiology) regarding which a detailed announcement has been published in the *Calcutta Gazette* and the *Bihar and Orissa Gazette*.'

'My next announcement regards the Sir William Jones Memorial Medal. This medal is awarded biennially for conspicuously important Asiatic Researches with reference alternately to (1) Science, including Medicine, and (2) Philosophy, Literature and History.

'This year the medal is for Science, and is awarded to Rai Sir Upendra Nath Brahmachari Bahadur, Kt., for his long sustained and distinguished labours in the field of medical research.'

'My next announcement regards the Brühl Memorial Medal. This medal is awarded every three years for conspicuously important contributions to the knowledge of Asiatic Botany. This year the medal is awarded to Mr. I. H. Burkill, Late Director of Gardens, Straits Settlements, for his important researches in Asiatic Botany.'

'My next announcement regards the Indian Science Congress, Calcutta Prize. This prize was instituted in the year 1928, to be awarded in such years as the session of the Congress is held in Calcutta, for conspicuously important services to the Indian Science Congress, or on a member of the Indian Science Congress, who, in the opinion of the Council, has made conspicuously important contributions to Science.

The Indian Science Congress, Calcutta Prize, is awarded to Dr. Meghnad Saha, F.R.S., of the Allahabad University with special reference to his work for the Indian Science Congress.'

The President for 1935 made also the following announcement :—

'It is now my pleasant duty to announce that some admirers of the late Mr. Pramatha Nath Bose to whom I have referred in my address, have decided to perpetuate the memory of this distinguished Geologist by the institution of a periodical award to be named after him. The Committee which has collected funds for this purpose is headed by our fellow member, Sir B. L. Mitter, and he has written to say that it is the intention of the Committee to offer to the Society a sum for the purpose of awarding a periodical commemoration medal for outstanding work in Geology, in the manner of the various other awards already in existence. This offer will be placed before the Council and I doubt not that the Council will gratefully accept it and gladly share in honouring the memory of its late eminent member.'

After these announcements the President for 1935 declared the Annual Meeting to be dissolved and invited the guests present to examine the collection of exhibits (See page 24) and the members present to reassemble round the table for the Ordinary Monthly Meeting for the election of members and transaction of business.

## ANNUAL ADDRESS, 1934-35.

### THE DEVELOPMENT OF SCIENTIFIC RESEARCH IN INDIA TO THE END OF THE NINETEENTH CENTURY.

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### THE DEVELOPMENT OF SCIENTIFIC RESEARCH IN INDIA TO THE END OF THE NINETEENTH CENTURY.

#### I. INTRODUCTION.

At our last Annual Meeting, in February, 1934, I had the honour to occupy this Chair in place of Deaths. Sir Charu Chandra Ghose, who had been compelled during 1933 to resign on account of ill-health his office as President of our Society. On your behalf I voiced the hopes of you all that Sir Charu should soon be restored to health. Alas! our hopes were in vain, for during the year Sir Charu passed away and left Calcutta deprived of one of its leaders. An obituary notice of Sir Charu Ghose will be published in our *Proceedings*, but it will not be out of place to recall that

Sir Charu rose very high in his own profession, acting as Chief Justice of Bengal on several occasions, whilst in 1934, after an apparent partial restoration of health he accepted temporarily, knowing the risk to his life, the post of Member of the Council of the Governor of Bengal in the vacancy caused by the death of Sir Provash Chandra Mitter, another of our distinguished members. Those who had the privilege of the friendship or even acquaintanceship of Sir Charu Ghose will remember his old world courteous manners, and my colleagues on the Council of this Society will recall the urbanity with which he conducted the meetings of the Council.

We must also lament the death at a comparatively early age of Rai Bahadur Dr. S. R. Kashyap, Professor of Botany, Lahore. Dr. Kashyap was a Fellow of this Society, was President of the Indian Science Congress at the Bangalore session in 1932, and had been selected as one of the original Vice-Presidents of the National Institute of Sciences of India.

The death of Dr. Ekendra Nath Ghosh, Professor of Biology, Medical College, Calcutta, is specially to be regretted on account of his comparative youth and the versatility of his studies, both in Biology and in the ancient Sanskrit Shastras, Ayurveda and Hindu Astronomy.

Finally I must mention the death of the Rev. Father E. Blatter, S.J., of Bombay, who was not a member of our Society, but was the first recipient (in 1931) of the Brühl Medal, in recognition of his valuable botanical researches.

The most important event during 1934 to our Society was the celebration on 15th January, 1934, of the completion of 150 years since the founding of the Society on the same date

150th Anniversary  
Celebrations.

in 1784. As you will remember our celebrations took the form of a *Conversazione* with exhibits in the Indian Museum, followed by a dinner in these rooms, at which we were honoured by the attendance of our Patron, His Excellency Sir John Anderson, Governor of Bengal. In continuation of this dinner a special meeting was held during which we received an address from His Excellency and I had the honour also of addressing you. We also elected 12 distinguished savants abroad—six men of letters and six scientists—as Special Anniversary Honorary Members, and received addresses from numerous learned societies both in India and abroad. One part of our celebrations remains unfinished. Your Council resolved to prepare and publish an Anniversary Volume recording the progress of the Society during the 50 years that have passed since the issue of the *Centenary Review* in which were recorded the activities of our Society during the first century of its existence. The first stage in the preparation of this Anniversary Volume was the compilation of a Bibliography of the papers published by the Society during the third half-century. This proved to be a bigger task

than was anticipated as, in addition to the normal publications of the Society, we now publish the *Proceedings* of the Indian Science Congress, of which 21 volumes have been issued. However, the Bibliography has now been completed and the authors to whom the various sections of the Anniversary Volume have been entrusted may expect shortly to receive the portions of the Bibliography relating to their own subjects. It is a matter of some interest that at the time of our 150th Anniversary celebrations one of the authors of our Centenary Review was still alive, namely Mr. Pramatha Nath Bose, who wrote the Natural Science Section of that Review published in 1885. Mr. Bose, who was formerly an officer of the Geological Survey of India, passed away peacefully during 1934 shortly before his 80th birthday.<sup>1</sup>

I had intended to propose one other step in connection with our Anniversary Celebrations, namely to start a special Anniversary Celebration Fund in aid of the labours of our Society. For we have much need of an income considerably larger than that we now enjoy! But unfortunately, on the very day of our celebrations, a disastrous earthquake occurred in North Bihar and Nepal, and the calls upon the generosity of the public to swell the Viceroy's Fund in aid of the sufferers from this cataclysm of Nature were so urgent and extensive that I deemed it inadvisable to make the appeal that was otherwise so desirable for the benefit of our own Society.

It was suggested during the year that one other measure might be taken in celebration of the 150th Anniversary of our Society, namely to apply for a Royal Charter. As you know, proposals were put before the members during the year and a large majority was obtained in favour of our proposal. On further examination of this proposal, however, we found that we had not clearly distinguished between obtaining a Royal Charter, which was a matter for the consideration of His Majesty's Privy Council and would not necessarily involve a change of name, and an application to modify the name of our Society by the addition of the predicate 'Royal', which is a prerogative of His Majesty the King. Accordingly this matter has not yet been carried to completion.

As you all know, during the past year scientists in India have been much exercised over proposals to found an Indian Academy of Sciences, for which purpose an *ad hoc* committee had been appointed by the General Committee of the Indian Science Congress Association at the session in Bombay in January, 1934. The cause of disturbance was the sudden foundation of a society of this name at Bangalore whilst the Academy Committee of the Indian Science Congress

Academies and the  
National Institute of  
Sciences of India.

<sup>1</sup> An obituary notice of Mr. P. N. Bose has already been published in the *Rec., G.S.I.*, LXVIII, p. 240.



had the matter under consideration. This action of our Bangalore friends led to a very confused and confusing situation, which gradually became clarified when the true logic of the position became evident. For there were already in existence two Indian Academies of Science, although they had not taken this name. One was our Society, the Asiatic Society of Bengal, which is an Academy in the fullest sense, namely an Academy of Arts, Letters, and Sciences, and the U.P. Academy of Sciences founded in 1930. Once the Academy Committee of the Indian Science Congress were faced with the Bangalore *fait accompli*, it became evident that there were three Indian Academies of Sciences in the field and that the Academy Committee could suitably modify their activities so as to found a body to co-ordinate the labours of the three Academies and of any others that might subsequently be formed. As a result the National Institute of Sciences of India was founded exactly 4 weeks ago at an Inaugural Meeting in the Senate House of Calcutta University during the recent session of the Indian Science Congress, and the first Ordinary General Meeting of this Institute was held in these rooms on the following day.

Your Council had nominated me early in the year as representative of the Asiatic Society of Bengal on the Academy Committee of the Indian Science Congress, and it had fallen to my lot to act as Chairman of this Committee during the year, and to guide the Committee during its exceedingly difficult labours. And eventually I had the honour of being elected President of the newly formed organization, the National Institute of Sciences of India. In this capacity I was faced with the necessity of devising an Inaugural Address. In order to define the duties of the new organization and explain what should be its functions with reference to existing scientific organizations in India, of which the Asiatic Society of Bengal is by far the oldest and most distinguished, I found it desirable to discuss the course of the development of provision for scientific research in India. The draft of the address thus devised proved to be too long for a single occasion, and I decided, therefore, to adopt the procedure of one of your recent Presidents, Lt.-Col. R. B. Seymour Sewell, who was President of the Indian Science Congress held at Nagpur in 1930 and of this Society in the same year. Col. Sewell dealt with one subject—The Problem of Evolution—in his two successive Presidential Addresses, delivering the first part at Nagpur in January and the second part in these rooms in February. Col. Sewell was able to deliver his two addresses in their correct sequence; but in my case it seemed desirable to discuss before the National Institute of Sciences the later section of my subject, namely the development of scientific research in India in the Twentieth Century, and to reserve for our Society—the older body—the section dealing with such developments up to about the end of the Nineteenth Century.

## II. EARLY DEVELOPMENTS IN SCIENCE.

Although in any country the development of science and the provision for scientific research must from the point of view of organization be restricted in the first place to a national basis as the major unit, yet, as we all know, Science is international in its relationships, and whatever is done nationally in Science must have international co-ordinations. In order to understand India's position with reference to the development of scientific research, we must, therefore, first glance briefly—very briefly—at the development of Science abroad.

It is well known that scientific investigations were made as early as the 4th or 3rd millennium B.C. in the form of astronomical observations by the Babylonians, and that the Egyptians had developed certain branches of mathematics, also by the third millennium B.C. The real birth of Science may, however, be assigned to the period of pre-eminence of the Grecian schools of Asia Minor, Greece, and Alexandria between 600 and 200 B.C. when such intellectual giants as Pythagoras, Hippocrates, Socrates, Plato, Aristotle, Theophrates, Euclid, and Archimedes flourished. Greece was at its Golden Age in 450–400 B.C. at Athens, and it is then that, according to some, Science really took its birth, Greek science including mathematics, astronomy, biology, medicine, physics and chemistry. The Roman Empire followed Greece, and with the break up of this Empire a thousand years of darkness descended upon the world until the Renaissance, the name given to the intellectual re-awakening during the 14th, 15th, and 16th centuries in Modern Europe. The Renaissance was preceded and rendered possible by the foundation of universities in Europe at Paris, Bologna, Salerno, Oxford, and Cambridge, beginning as early as the 11th century A.D. and based usually on old monastic schools; and the Renaissance itself can be dated really from the 13th century. The Renaissance was a period of efflorescence in all branches of learning—letters, art, science, and mathematics. It is not possible here, nor am I the competent person, to attempt to review the growth of science during the Renaissance, and it is sufficient for me to mention only such outstanding names as Roger Bacon, Leonardo da Vinci, Copernicus, Galileo, Francis Bacon, and Descartes, followed by Isaac Newton in the 17th century, to bring us down to the full tide of modern scientific research, with the foundation of the Royal Society of London in 1660 and of the *Académie royale des sciences* in France in 1666. The Royal Society of London has remained unchanged in name, but the French Academy of Sciences and other French Academies for other branches of learning became grouped in 1795 as the *Institut national des sciences et des arts*, a title which was simplified in 1816 to *l'Institut royal de France*, which

is now called the *Institut de France*. The Institute of France is composed of five academies, of which the Academy of Sciences is one, the other constituent academies being the *Académie française*, the *Académie des Inscriptions et Belles-Lettres*, the *Académie des Beaux-Arts*, and the *Académie des Sciences Morales et Politiques*, the Academy of Sciences being the third in order of seniority. As almost every country in Europe now has its Academy either of one branch of knowledge alone, such as science, art, or letters, or of two or more of these branches together, it is of interest to allude briefly to a passage in my Inaugural Address to the National Institute in which I mentioned that the original Academy was a garden in Athens once owned by Academus and utilized by Plato for some 50 years for teaching and discussion, and that this original Academy persisted for some 300 years from about 400 B.C.: so that the original Academy may be regarded as a philosopher's garden, in which philosophers discussed all branches of learning, arts, letters, science, mathematics, and philosophy *stricto sensu*. Clearly our Asiatic Society is an Academy in the fullest sense of the word and it is a pleasant thought that this beautiful building of ours must be regarded as spiritually a philosopher's garden, if such a mixed metaphor can be pardoned.<sup>1</sup>

It must not be thought that during the whole of the several millennia between the early astronomical observations of the Babylonians and the introduction of modern science into India by Europeans, Asia has been scientifically asleep. The Hindus and the Arabs have also made their contributions. The Hindus in particular made advances in mathematical science following on the stimulus to intercourse with Europe resulting from Alexander's conquest. Amongst these mathematicians may be mentioned Bhaskara (c. A.D. 1120) for his contributions to algebraic notation. I have mentioned this name specially because it reappears now amongst modern Indian scientists in the person of the Director of the Nizamia Observatory at Hyderabad. All Hindu science in India may not date, however, from the introduction of Greek influence. For, in a recent paper read before our Society in 1934, Dr. S. L. Hora has shown that the ancient Hindus, as revealed in a passage in *Susrutasamhita* (c.a. 300 B.C.), had exact knowledge of the habitats of fishes and of the modes of their locomotion, and that Susruta's knowledge of the latter has been rediscovered only in the last few years by zoologists in America and England. It is known also that the Hindus had considerable knowledge of medicine and of chemistry as has been summarized for the latter in Sir P. C. Ray's 'History of

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<sup>1</sup> The preceding paragraph is based largely on information given in K. M. Westaway's 'The Endless Quest, Three Thousand Years of Science', Blackie & Son, London (1934).

Hindu Chemistry', published in 1902. Further researches by oriental scholars into old Sanskrit and Pali texts may bring to light knowledge of other branches of science possessed by the ancient Hindus. Reference may also be made to B. N. Seal's work on 'The Positive Sciences of the Ancient Hindus', London, 1913, in which claims are made on this subject that are not accepted in full by all. Dr. Bains Prasad's paper 'Some Pre-Linnaean Writers of Indian Zoology' gives information concerning the knowledge both of the Hindus and of the Moghals.<sup>1</sup>

It seems likely, indeed, that when the full range of knowledge of the ancient Hindus in the realms of science and mathematics comes to be known, as far as this is possible, it may prove to be partly indigenous and pre-Greek and partly based on Greek influence.

Although the first results of the Arab irruptions into ancient civilization in Asia and North Africa were disastrous, in that the Arabs completed the destruction of the world-famous library of Alexandria—a process already partly carried out by Christians about a century earlier,—yet, as so often happens, the conquerors soon settled down and took an interest in the learning of the conquered, collecting and translating Greek MSS, and also the works of Hindu writers, so that Arab science was built on Greek and Hindu science. The Arabs took a special interest in astronomy, chemistry, and medicine, and for further information on their contributions to science, reference may be made to the 'Legacy of Islam',<sup>2</sup> a fascinating work showing the influence of Islam upon European civilization. Although the Arab schools of Bagdad and elsewhere produced much work in science and mathematics, the special ability of the Arabs lay in arts, crafts, and industries, a special feature of Muslim civilization exemplified by the superb buildings, and the beautiful porcelains and tiles, manuscripts and pictures, carpets and metal work of Egypt, Mesopotamia, Persia, and India. There is still probably much to be learnt, however, concerning Arab knowledge of science as contained in ancient manuscripts, and here in India Stapleton, Azo, and Hidayat Hosain, and Maqbul Ahmad have during the past 30 years contributed translations of alchemical Arabic manuscripts to the *Memoirs* of the Asiatic Society of Bengal.<sup>3</sup>

<sup>1</sup> From Acharyya Sir P. C. Ray Commemoration Volume, Calcutta, 1932.

<sup>2</sup> Edited by Sir Thomas Arnold and A. Guillaume, Clarendon Press, Oxford (1931).

<sup>3</sup> *Mem. Asiat. Soc. Bengal*, I, pp. 25–41 (1905); I, pp. 47–70 (1905); III, pp. 57–94 (1910); VIII, pp. 317–418 (1927); VIII, pp. 419–460 (1929); XII, pp. 1–213 (1933).

We are now in a position to trace briefly the development of science in India since the arrival of western civilization.

### III. THE DEVELOPMENT OF SCIENTIFIC RESEARCH IN INDIA IN THE EIGHTEENTH AND NINETEENTH CENTURIES.

#### A. *Societies.*

The history of the modern development and study of science in India really commences with the arrival of Sir William Jones in October, 1783, as a Puisne Judge of the The Asiatick Society. Supreme Court at Fort William in Bengal. Sir William Jones was a distinguished scholar and linguist and was devoted to oriental researches, and he soon noted the want of an organized association in Calcutta as a drawback to progress.

‘Accordingly, while he engaged himself in the study of the Sanskrit language, which he had till then not acquired, he invited the co-operation of the leading men of the time in Calcutta for the formation of an institution where united action could be undertaken to promote the study of oriental literature and science, and where, by the co-operation of the many, the talents and abstract studies of the few would prove most effectual, and derive the stimulus which emulation, publicity, and a common interest never fail to excite.’

As a result, thirty gentlemen representing the élite of the European community in Calcutta at the time met on the 15th of January, 1784, and Sir William Jones delivered a ‘Discourse on the Institution of a Society for enquiring into the History, civil and natural, the Antiquities, Arts, Sciences, and Literature of Asia’. As a result of this address, the ‘Asiatick Society’ was founded.

Sir William Jones in his original address explained the objects of the Society in the following terms :—

‘You will investigate whatever is rare in the stupendous fabric of nature; will correct the geography of Asia by new observations and discoveries; will trace the annals and even traditions of those nations who, from time to time, have peopled or desolated it; and will bring to light their various forms of Government, with their institutions, civil and religious; you will examine their improvements and methods in arithmetic and geometry—in trigonometry, mensuration, mechanics, optics, astronomy and general physics; their systems of morality, grammar, rhetoric and dialectic; their skill in surgery and medicine, and their advancement, whatever it may be, in anatomy and chemistry. To this you will add researches into their agriculture, manufacture, and trade; and, whilst you enquire into their music, architecture, painting, and poetry, will not neglect those inferior arts, by which comforts, and even elegances of social life, are supplied or improved.’

And he added :—

‘If now it be asked, what are the intended objects of our enquiries within these spacious limits, we answer, Man and Nature; whatever is performed by the one, or produced by the other.’

The comprehensive phrases of Sir William Jones have since been paraphrased into :—

‘The bounds of its investigations will be the geographical limits of Asia, and within these limits its enquiries will be extended to whatever is performed by man, or produced by nature.’

It is clear, therefore, that in its original scope the Asiatic Society was to include all the functions carried out by the Institute of France in its five constituent academies.

That the Society did, in fact, live up to this ideal during the first century of its existence can be judged by any one who reads the Centenary Review of the ‘Researches of the Society, 1784–1883. In this volume it is claimed that the first century’s record of services include the provision of a commodious house for scholars, the making of a library, of a collection of ancient coins and medals, of a collection of pictures and busts, and the formation of Archæological, Ethnological, Geological, and Zoological collections or Museums. In addition, the Asiatic Society had published 354 volumes of works of various kinds.

For some time the Asiatic Society was the only learned society in India, but in 1823 a new Asiatic Society, the Asiatic Society of Great Britain and Ireland (later the Royal Asiatic Society of Great Britain and Ireland) was formed in London by Henry Thomas Colebrook, a former President of our Asiatic Society, and this led to our Society, the original Asiatic Society, being designated the Asiatic Society of Bengal for ease of identification. Branches of the Royal Asiatic Society of Great Britain and Ireland were later established in Bombay, Madras, Colombo, and Singapore, but they have never been serious rivals of the Asiatic Society of Bengal.

The Bombay Branch, which still persists, has absorbed two other societies during its existence. For the Literary Society of Bombay founded in 1804 became the Bombay Branch of the Royal Asiatic Society of Great Britain and Ireland in 1835, and the Bombay Geographical Society founded in 1831 was amalgamated with the Bombay Branch of the Royal Asiatic Society in 1873. These two absorbed Societies are represented by three volumes of *Transactions* of the Literary Society of Bombay (1819 to 1823) and 19 volumes of *Transactions* of the Bombay Geographical Society (1844 to 1874). In Madras a society called the ‘Madras Literary Society and Auxiliary of the Royal Asiatic Society’ appears to have commenced work in 1833, and published a Journal entitled first the *Journal of Literature and Science* and then the *Madras Journal of Literature and Science*, which continued to 1894.

Two other Societies formed during the past century deserve notice. One is the Agricultural Society of India founded in Calcutta, 1820, the title of which was changed to Agricultural and Horticultural Society

Branches of the Royal  
Asiatic Society

Other Societies.

of India by 1823, and later to Agri-Horticultural Society of India, the present title. This Society's publications date from 1829 (*Transactions*) and are still issued as the *Journal and Proceedings*. The other Society is the Bombay Natural History Society founded in 1883, and the publisher of the excellent and well-known *Journal* from 1886 to date. There appears to have been no long-lived separate medical society, but the *Indian Medical Gazette* published in Calcutta since 1866 has provided for the publication of medical researches in India.

### B. Services.

During the early days of the East India Company there were no scientists employed as such, although the Company entertained the services of medical officers, surveyors, and assayers at the mint. As a consequence the early scientific work of India was practically all amateur work done in spare time by medical men who were interested in science, by enthusiastic army officers, and by officers in civil employ.

There were assayers at the Calcutta Mint as early as 1792, when Robert Blake was Assay Master. Mint Assayers. but more important dates to us are 1816, when Dr. Horace Hayman Wilson was appointed Assay Master, and 1833 when he was succeeded by James Prinsep after several years at the Mint Office at Benares. Wilson and Prinsep were, as you know, two of the most famous and learned men who have adorned the rolls of our Society, the memory of James Prinsep being perpetuated by 'Prinsep's Ghat', built by public subscription. The assayers and medical men were, I suppose, the earliest of the modern chemists in India, but they were not employed as research officers.<sup>1</sup>

The first scientific service to be established in India was the Trigonometrical Survey of the Peninsula with Colonel Lambton as the first geodesist. Surveys. in 1800. This was changed to the Great Trigonometrical Survey in 1818, also under Lt.-Col. Lambton. There were also Topographical and Revenue Surveys and all these were grouped in 1817 under the first Surveyor-General in India, Lt.-Col. Colin Mackenzie.<sup>2</sup> This title has persisted unchanged down to the present day. The three surveys were united in 1878 as the Survey

<sup>1</sup> The Assay Department of the Calcutta Mint was closed in 1923 as a measure of retrenchment, but there is still an Assay Department at the Bombay Mint. The earliest recorded Mint Master in Calcutta dates from 1781, and it is of interest that Wilson is recorded as having been Mint Master—presumably officiating—as early as 1814, that is two years prior to becoming Assay Master. I am indebted to Col. Stagg, the present Master of the Mint, Calcutta, for these details.

<sup>2</sup> Major James Rennell was Surveyor-General of Bengal as early as 1767.

of India and the Trigonometrical Survey became the Geodetic Branch in 1924, a famous departmental name thus disappearing.

There were geologists in Government employ as early as Dr. Voysey in 1818, Mr. Williams (1846 to 1848), and Dr. McClelland (1848), who, as Geological Surveyor to Government, immediately preceded Dr. Oldham. The Geological Survey of India as a Department was not, however, founded until 1851 when Dr. Thomas Oldham arrived in India for the purpose.<sup>1</sup> Even then this Department appears to be the oldest scientific service in India *stricto sensu*.

Provision for botanical study has existed in India since an early date, for the Calcutta Botanical Gardens, now the Royal Botanic Gardens, were founded at Sibpur in 1788 at the instance of Col. Alexander Kyd, who unofficially held the post of Superintendent of the Gardens. Officially the first Superintendent of the Gardens was Roxburgh, and this post has since been held by a succession of distinguished botanists. In 1889 the Botanical Survey of India was founded and the Superintendent of the Gardens became the Director, Botanical Survey of India, Brigade-Surgeon G. King, afterwards Sir George King, being the first officer to fill this post. From 1793, at least, there has been no break in the continuity of the botanical work at Sibpur, and official provision for botanical work in India thus precedes that for any other science.

The next important step to notice is that the growing collections of the Asiatic Society led in 1866 to the passing of the first Museum Act, under which the Society transferred its zoological, geological and archæological collections to a Board of Trustees, and the Indian Museum was formed. The geological collections were entrusted to the Geological Survey and the zoological and archæological collections placed under a Superintendent, who became known as the Superintendent of the Indian Museum. This was not, however, the first step in the provision for zoological research in India, and we can go back at least as far as 1841 when

Edward Blyth was appointed Curator of the Society's museum, to be succeeded in 1865 by John Anderson, who became the first Superintendent of the Indian Museum on its foundation in 1866. In 1916, when the late Dr. Nelson Annandale, one of your past-Presidents, was Superintendent, the Zoological Section of the Museum was converted into the Zoological Survey of India with Dr. Annandale as the first Director. This Department, although in name but a recent one, really dates historically, it will be seen, from the foundation of the Indian Museum in 1866.

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<sup>1</sup> William Theobald who had arrived in India in 1849 was transferred to this service.



The early meteorological observations in India were made at observatories established by the East India Company, the first being the Madras Astronomical Observatory opened in 1792 with meteorological observations dating from 1796, and the Colaba Observatory completed in 1826 with meteorological observations dating from 1841. In Calcutta an observatory was maintained in the Survey Office building in Park Street from 1824, until the completion of the Alipore Observatory in 1875. In 1857 the Asiatic Society of Bengal appointed a committee which, after the interruption caused by the Mutiny, drew up a report to Government in 1862, and as a result our Society was asked to formulate a scheme for a controlling authority capable of directing and utilizing the work of observers in India. H. F. Blanford, after 7 years service in the Geological Survey of India, was appointed Professor of Science in the Presidency College, Calcutta, and in 1867 became Meteorological Reporter of Bengal. Finally the Government of India decided to appoint a Meteorological Reporter for the whole of India, and H. F. Blanford was transferred to this post in 1875, which may be taken as the date of foundation of the Meteorological Department of the Government of India. This Department is now responsible for the maintenance of numerous observatories and observing stations throughout India. The present title of the head of the service is Director-General of Observatories.

Provision for research in the applied sciences Agricultural, Forests, Medical, and Veterinary research, Applied sciences. has come at a much later date than for the surveys, geology, botany, zoology, and meteorology, and belongs in the main to the 20th century, but may conveniently be mentioned here.

In Agriculture provincial Departments of Land Revenue and Agriculture, or of Agriculture alone, Research Institutes. were formed towards the end of the century: Bombay (1885), Madras (1889), Shillong (1894), Allahabad and Nagpur (1895) and Bengal (1896), followed by the Indian Agricultural Research Institute at Pusa in 1903. For Veterinary work the Imperial Bacteriological Laboratory was opened at Poona in 1890, moved to Muktesar in 1893, and the title changed to Imperial Institute of Veterinary Research in 1925. The Forest Research Institute at Dehra Dun was opened in 1906. All-India provision for Medical Research is represented by the Central Research Institute founded at Kasauli in 1906 and the All-India Institute of Public Health and Hygiene founded in Calcutta only last year (1934). There are also, of course, medical research institutions provincially administered, such as the School of Tropical Medicine, Calcutta, and the Haffkine Institute, Bombay.

Mention may also be made of the Indian Institute of Science

founded at Bangalore in 1911, supported mainly by private bequests supplemented by Government grants, and directed to research and advanced scientific education.

#### IV. SUMMARY OF DEVELOPMENTS IN THE TWENTIETH CENTURY.

With the formation of research institutes we have, however, entered the present century, and the developments for the organization of scientific research in this century formed the subject of my Inaugural Address to the National Institute of Sciences of India, to which a reference has already been made. For the sake of completion I may mention that in that Address I show that the 20th century in India has been a period of foundation of numerous specialist societies, of research institutions, and of new universities in addition to those founded in the 19th century, which were the Universities of Bombay, Calcutta, and Madras, all founded in 1857, the University of the Punjab (1882), and the University of Allahabad (1887).

I point out in the Address referred to that with the continuous birth of new specialist bodies, services, societies, universities, research institutes, there is a rapidly increasing tendency to specialization, with resultant isolation of workers, with an increasing need for organizations directed to counter-acting fissiparous tendencies so as to bring men of science and of other branches of learning back to a common fold. I mention the Board of Scientific Advice consisting of the heads of the Government of India scientific departments founded in 1902 and suspended in 1924. I refer also to the Indian Research Fund Association (1911) and the Imperial Council of Agricultural Research (1929) formed specially to deal with the needs of medical and agricultural research respectively, and to the Indian Science Congress of which the inaugural meeting was held in 1914 in these rooms and which is managed by our Society.

I cannot close this Address without referring briefly to the new National Institute of Sciences of India. I have mentioned in the Introduction to this Address the circumstances that led to the foundation of the National Institute of Sciences of India only four weeks ago. The aims and objects of that Institute were discussed in my Inaugural Address and need not be repeated here. Suffice it to say that the main aims of the National Institute are to act as a co-ordinating body for scientific organizations in India and to lay the foundations, if necessary, for the formation of a National Research Council in this country. In order to encourage effective co-operation, provision has been

made for an additional Vice-President and an additional Member of Council on the Council of the National Institute representing each of the three co-operating Academies and the Indian Science Congress ; and your Council has nominated Sir Upendra Nath Brahmachari and Mr. C. C. Calder respectively as additional Vice-President and additional Member of Council representing your Society in the Council of the National Institute.

It is known to all of you and is also brought out in the earlier portions of this Address that the Asiatic Society of Bengal has been the mother either directly or indirectly of a large proportion of the scientific research done in India : it is appropriate, therefore, that we should have offered hospitality to the National Institute of Sciences in the form of office accommodation for such time as it suits the interests of this Institute to locate its headquarters in Calcutta.

#### V. CONCLUSION.

The general theme of this address and of my address to the National Institute of Sciences has been the development of scientific research in India. Starting with the comprehensive treatment of such research provided for by the foundation of the Asiatic Society of Bengal in 1784, the subsequent story has been, until recently, one of increasing specialization. This specialization was slow until after the middle of the nineteenth century, when the tendency began to develop force. By the beginning of the twentieth century, rapidly increasing specialization with the formation of a multitude of new specialist organizations was in full swing. But fortunately at about the same time the necessity for co-ordinating bodies became recognized, and this has led successively to the formation of the Board of Scientific Advice (1902-1924), of the Indian Science Congress Association (1914 to date) and finally of the National Institute of Sciences of India. This final development is in accordance with the genius of our Society, for concurrently with the spate of specialist tendencies and activities, your Society has always maintained its broad general basis, showing its generosity as the mother of new developments often of a specialist nature whilst preserving its position as a philosopher's garden where all may walk and talk. Suddenly we find that we are in fashion again, for the pendulum is swinging our way. And as you will find from the Report of your Council we are considering measures to meet the swing of the pendulum.

*'There is a tide in the affairs of man which, taken at the flood, leads on to fortune.'*

L. L. FERMOR.

## OFFICERS AND MEMBERS OF COUNCIL ASIATIC SOCIETY OF BENGAL, 1935.

*Elected and announced in the Annual Meeting,  
4th February, 1935.*

### *President*

L. L. Fermor, Esq., O.B.E., A.R.S.M., D.Sc. (London),  
F.G.S., M.Inst.M.M., F.R.S., F.A.S.B.

### *Vice-Presidents*

Sir David Ezra, Kt., F.Z.S., M.B.O.U.  
Rai Sir Upendra Nath Brahmachari Bahadur, Kt., M.A.,  
M.D., Ph.D., F.S.M.F., F.A.S.B.  
Lt.-Col. Knowles, B.A. (Cantab.), M.R.C.S., L.R.C.P.,  
I.M.S., F.A.S.B.  
The Hon'ble Sir B. L. Mitter, K.C.S.I., Kt., Barrister-at-  
Law.

### *Secretaries and Treasurer*

General Secretary:—Johan van Manen, Esq., C.I.E.,  
F.A.S.B.  
Treasurer:—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S.,  
F.R.S.E., F.A.S.B.  
Philological Secretary:—S. K. Chatterji, Esq., M.A., D.Lit.  
(London).  
Joint Philological Secretary:—Shamsu'l 'Ulama Mawlawi  
M. Hidayat Hosain. Khan Bahadur, Ph.D., F.A.S.B.  
Natural History Secretaries { Biology:—Baini Prashad, Esq., D.Sc.,  
F.Z.S., F.R.S.E., F.A.S.B.  
Physical Science:—J. N. Mukherjee,  
Esq., D.Sc. (Lond.), F.C.S. (Lond.).  
Anthropological Secretary:—Rai Bahadur Ramaprasad  
'Chanda, B.A., F.A.S.B.  
Medical Secretary:—Lt.-Col. R. N. Chopra, C.I.E., M.A.,  
M.B., I.M.S., F.A.S.B.  
Library Secretary:—A. M. Heron, Esq., D.Sc. (Edin.),  
F.G.S., F.R.G.S., F.R.S.E.

### *Other Members of Council*

L. R. Fawcus, Esq., B.A. (Cantab.), I.C.S.  
Percy Brown, Esq., A.R.C.A., F.A.S.B.  
The Hon'ble Mr. Justice J. Lort-Williams, K.C., Barrister-  
at-Law.  
C. C. Calder, Esq., B.Sc., F.L.S.  
N. G. Majumdar, Esq., M.A.

## EXHIBITION ANNUAL MEETING

LIST OF EXHIBITS SHOWN AFTER THE ANNUAL MEETING OF  
THE ASIATIC SOCIETY OF BENGAL, ON THE 4TH  
FEBRUARY, 1935.

### 1. A. F. M. ABDUL ALI.

#### *Miscellaneous Historical Documents.*

- (1) List of Fees of the Chaplaincy of Fort William.

(H.D. Pub., 26 Oct., 1761, No. 3.)

- (2) Letter from the Chaplains and Church Wardens requesting that the Engineer should be directed to build the Church in the New Fort.

(H.D. Pub., 12 Nov., 1764, No. 7.)

- (3) Estimate of the expenses incurred by the gentlemen of the Vestry on account of the building of the Church and its establishment, and of those to be incurred for further additions and improvements to the Church.

(H.D. Pub., 23 Oct., 1789, No. 10.)

- (4) Letter from Mr. Charles Floyer, Mint Master, intimating that the new ten *Sun Sicca* Rupees have been struck in the Calcutta Mint and that a gratuity has been paid to the several Artists employed therein, and forwarding a few new Moorshedabad *Sicca* Rupees stamped differently which had been found accidentally.

(H.D. Pub., 27 June, 1769, No. 4.)

- (5) Proceedings of the Committee for enquiring into the causes of the scarcity of silver coin.

(H.D. Pub., 6 Dec., 1787, No. 28.)

- (6) Copy of letter from Lieut.-Col. Archibald Campbell and Major Henry Watson submitting proposals relative to the construction of docks, etc.

(H.D. Pub., 27 Mar., 1770, No. 2a.)

Particular proposals of Lieut.-Col. Archibald Campbell and Major Henry Watson relative to the construction of the projected docks, etc., near the mouth of Surman's *nulla*.

(H.D. Pub., 27 Mar., 1770, No. 3a.)

Boards' minute resolving that Col. Campbell and Major Watson should be tied down by certain engagements to secure the docks to the Company but that no contract should be made with them to determine the price.

(H.D. Pub., 27 Mar., 1770, No. 4a.)

- (7) Governor-General's minute, proposing certain regulations for the prevention of the breaking out of fire in the town of Calcutta.

(H.D. Pub., 27 Mar., 1780, No. 31.)

- (8) List of damages made by fires in the town of Calcutta from the 29th February, 1780.

(H.D. Pub., 10 Apr., 1780, No. 3.)

(9) Letter from Lieut.-Col. J. Fortnom, Chief Engineer, submitting the plans of Fort William.

(H.D. Pub., 24 Mar., 1775, No. 1.)

(10) Draft of a letter to Monsr. Chevalier, acquainting him with the provisions made for the subsistence of the Frenchmen at Chander-nagore and for the disposal of the captured property, and requiring him to come to Calcutta, or to depart for Europe.

(H.D. Pub., 2 Sept., 1778, No. 11.)

(11) Petition of the Greek inhabitants of Calcutta, requesting permission to erect a chapel.

(H.D. Pub., 11 Apr., 1774, No. 4.)

(12) Translation of a petition from Ghulam Haidar Khan, *Vakil* to the *Zemindar* of Birbhum, forwarding an address, on the administration of W. Hastings.

(H.D. Pub., 9 Jany., 1789, No. 24.)

(13) Translation of a petition from Muhammad Muhayyu-d-din Khan, *Vakil* to Khan Jahan Khan Bahadur Jasarat Jang, forwarding an address.

(H.D. Pub., 9 Jany., 1789, No. 25.)

(14) Translation of a similar address from *Maharaja* Raghunath-naram of Patchet.

(H.D. Pub., 9 Jany., 1789, No. 26.)

(15) Translation of a petition from Mir Zahid and others to Mr. E. Hay, Secretary, forwarding an address.

(H.D. Pub., 9 Jany., 1789, No. 27.)

(16) Translation of a petition from Ranje Chand Roy and other inhabitants of Calcutta to Mr. E. Hay, Secretary, forwarding an address.

(H.D. Pub., 9 Jany., 1789, No. 28.)

(17) Letters from Messrs. T. Motte and E. Maxwell, Superintendents of Police, suggesting measures for reducing the high price of provisions, and enclosing a plan for regulating the wages of menial servants.

(H.D. Pub., 3 Apr., 1786, No. 25.)

(18) Plan for regulating wages aforesaid.

(H.D. Pub., 3 Apr., 1786, No. 26.)

(19) Minute of the Governor-General, requesting that the sums of money which he advanced for the purchase of the ground on which the Calcutta Madrasah has been erected, and for the expenses of the institution itself, be returned to him and that the Committee of Revenue be directed to pay *Sicca* Rupees 1,200 per month, for the support of the institution.

(H.D. Pub., 3 June, 1782, No. 2.)

(20) List of the *kwallahs* and receipts given for the ground upon which the Madrasah stands, and of the sums paid for the same.

(H.D. Pub., 3 June, 1782, No. 3.)

(21) Copy of a letter from Mr. E. Tiretta, Surveyor to the Commissioners of Police, submitting with his observations a list of the names of the roads and lanes repaired.

(H.D. Pub., 10 Feb., 1790, No. 16.)

(22) Copy of a letter from Mr. E. Tiretta, Surveyor to the Commissioners of Police, submitting the names of the roads repaired in the Black Town.

(H.D. Pub., 10 Feb., 1790, No. 17.)

(23) Petition from Ramratan Sarma, Darpanarayan Sarma, Ramchandra Sarma and others, native inhabitants of Calcutta, representing that robberies and outrages have been more frequent and alarming in Calcutta than before, and soliciting that steps may be taken to redress their grievances.

(H.D. Pub., 31 Aug., 1791, No. 41.)

(24) List of subscribers to the above petition.

(H.D. Pub., 31 Aug., 1791, No. 42.)

## 2. K. BISWAS.

### *Algal Vegetation within the tidal zones of the river Hooghly.*

Blue green, brown and green deposits of algal vegetation are noticed on pebbles, bricks, wood, and other substrata along the banks of the river Hooghly and on the sides of floating buoys and ferry steamers. Examination of these deposits reveal a number of interesting algae as illustrated. *Lomentaria articulata* (Hud) Lyngb. var. *angustior*—obtained from Cherbourg, France, is the most common brownish pink deposit within the tidal zones. This alga is profusely coated with two diatoms *Melosira varians* Ag., and *M. Dickiei* (Thwait) Kurtz. *Coscinodiscus radiatus* Ehr. collected by Lt.-Col. Seymour Sowell from the Bay of Bengal at a depth of 700 fathoms has been caught in this river in front of the Royal Botanic Garden, Calcutta, by the plankton net both during high and low water. The green alga covering the bricks of the embankment is *Rhizoclonium riparium* Herv.

## 3. J. K. BOSE.

### (1) *Head Hunter's Dress.*

To be found amongst the Nagas. It was the distinctive dress of a person who had actually taken a head.

### (2) *Sheet-cloak of the Tangkhuls.*

Besides an insignificant loin cloth this is the only garment used by the Tangkhul Nagas of Manipur (Assam). The decorative patterns are the same in all cases.

### (3) *Sheet-cloak of the Marrings.*

The coloured border indicates the tribal division to which the wearer belongs.

### (4) *Ear ornaments of the Marrings.*

Used only by the young men of the Marrings.

### (5) *Fire-making by sawing by the Marrings.*

The fire is kindled by the following method :—‘One foot is placed on the unsplit end of the stick and the thong drawn under the fork in the notch and pulled swiftly to and fro until a spark catches in the tinder when a little blowing soon produces a flame’.

(6) *Neolithic Stone celt found in Manipur, Assam.*

(7) *Tobacco boxes of the Garos.*

These boxes are kept hanging from the waist with raw tobacco inside.

4. J. K. BOSE and J. K. GAN.

*A Musical Instrument of the Garos.*

A musical instrument in which string and percussion method are working simultaneously. This type of instruments is becoming obsolete.

5. PERCY BROWN.

*A portrait of Prince Dara Shikoh, eldest son of Emperor Shah Jahan.*

Painted by Hunbar, c. A.D. 1650.

6. C. C. CALDER and K. BISWAS.

*Original manuscript of Dr. William Roxburgh.*

Dr. William Roxburgh succeeded Lt.-Col. Robert Kyd, the founder of the Royal Botanic Garden, Calcutta, in the year 1793, as the first official Superintendent of the then East India Company's Botanic Garden at Sibpur. Dr. Roxburgh, for many years prior to his transfer, had been engaged in studying the then little known flora of the Northern Circars in the Madras Presidency. He was a most ardent and enthusiastic botanist, and a good gardener. Dr. Roxburgh continued to be Superintendent until 1813, when he was obliged to proceed to the Cape on account of his health. From the Cape he went on to St. Helena, and from thence to Scotland, where he died in 1815. Dr. Roxburgh was the first botanist who attempted to draw up a systematic account of the plants of India. During his busy life in this country, he prepared a 'Flora Indica' which contained systematic descriptions of all the indigenous plants known to him, as well as of many exotics then in cultivation in this Garden and in the neighbourhood of Calcutta. The manuscript of this work he took with him when he left India, intending to publish it during his residence in Scotland. His death prevented the execution of this plan; and with the exception of the first volume, which was printed (in two parts) with some additions and interpolations by Drs. Wallich and Carey in 1820, the work remained unpublished until 1832. In the latter year it was printed, exactly as the author had left it, by the piety of his sons, Captains James and Bruce Roxburgh, neither of whom was a botanist. This book is the basis of all subsequent Indian botanical works. It is an admirable production: the descriptions are accurate and graphic, and its authorship justly entitles Roxburgh to his title of 'the father of Indian botany'. A second edition of this excellent Manual was issued by Mr. C. B. Clarke in 1874, at a merely nominal price. Mr. Clarke's desire being to put the book within the reach of the poorest student. The original manuscript of this 'Flora Indica' is exhibited.



## 7. H. C. CHAKLADAR and J. K. GAN.

A Cranium, belonging to the Muchis of Bengal, in which is found the OS MALARE BIPARTITUM, otherwise known as the OS JAPONICUM, so rare in Indian Crania.

## 8. K. N. DIKSHIT.

- (1) *Stone image of Karttikeya from North Bengal.* Ht. 2' 8" × br. 1' 2".

This image, recently presented to the Indian Museum, is one of the most beautiful specimens extant of the Pāla art of Bengal. The god is represented as sitting in an easy posture on a peacock, and his youth and beauty, for which he is famous in Bengal, are more in evidence than his power and austerity as in other examples. The peacock with its proudly raised neck and unfurled plumage has a strikingly graceful form. The image dates from the 11th century A.D.

- (2) *A new Andhra coin.*

This unique coin was found in the Central Provinces and belongs to the Mahakosala Society, Raipur. It bears the figure of an elephant and Brahmi legend only on the obverse, the reverse being blank. The king's name is Sivasiri Āpilaka, who is no doubt to be identified with the Āpilaka of the Puranas, but is known from no other epigraphical source. The authenticity of the tradition embodied in the dynastic portion of the Purana is thus confirmed, but on numismatic grounds the place of this ruler is more with the later kings of the Andhra Dynasty than with the earlier ones as indicated in the Puranas.

- (3) *Terracotta matrix from Mahanad, Dist. Hughly.* Ht. 4½" × br. 3".

The ancient site of Mahanad in the District of Hughly has in recent years yielded several antiquities, among which is the terracotta matrix of a standing male figure which comes down from the Gupta period.

- (4) *Two silver punch-marked coins from Rajshahi.*

These coins are among the first punch-marked coins to be brought to light in Bengal and the study of the symbols on them will contribute to the understanding of the regional symbols on this most ancient coinage of India.

- (5) *Two silver punch-marked coins from Mathura.*

The punch-marked coins from Mathura form a special class distinguished by the concave shape and various distinctive symbols.

- (6) *One gold coin of Sasanka from Mahanad, Dist. Hughly.*

## 9. L. L. FERMOR.

*Ten Persian saddle-bags.*

The first three of these are from Niris, which lies to the east-south-east of the lake of this name, and the other seven from Shiraz, which

lies to the west of Lake Niris in Persia. In all probability, originally all these bags were in pairs like No. 10. The ones of greatest interest are No. 2 from Niris, with its futurist design, No. 4 from Shiraz with its swastika, and No. 9 from Shiraz with its four horsemen.

# 10. J. K. GAN and S. SINGH.

## *Cast of Australopithecus africanus.*

Cast of the skull discovered at Taungs, Bechuanaland, and S. Africa. It represents 'the young stage of an ape, conceivably not very far from the direct ancestral line of mankind'.

# 11. GEOLOGICAL SURVEY OF INDIA.

## (1) *Skull of the Rhodesian Man (Cast). (Homo rhodesiensis.)*

This skull, discovered in 1921 in the Broken Hill Mine, Northern Rhodesia, has close affinities with Neanderthal Man. There are features also which seem to indicate that this was nearer to the Chimpanzee and the Gorilla than was Neanderthal Man. The Rhodesian Man is to be regarded as an independent development of the nascent Neanderthal stock, an opinion which would explain both the resemblances to and the differences from the Neanderthal race.

(By exchange with the British Museum.)

## (2) *Skull, jaw and teeth and the brain cast of the Peking Man. (Sinanthropus pekinensis, Black.)*

These bones of one of the oldest of the races of Palaeolithic men were discovered near Peking, China. The endocrinal cast is that of an adolescent skull.

(By presentation from the late Prof. Davidson Black.)

## (3) *New Indian Fossil Primates (anthropoid apes).*

(Casts received from the Peabody Museum.)

Discovered from Haritalyangar, Bilaspur State.

- (1) *Ramapithecus brevirostris.*
- (2)     "     *hariensis.*
- (3) *Dryopithecus sivalensis.*
- (4)     "     *cautleyi.*
- (5)     "     *sp.*
- (6) *Sugrivapithecus salmontanus.*
- (7) *Bramapithecus thorpei.*
- (8) *Indraloris lulli.*
- (9) *Adatoutherium incognitum.*

## (4) (1) *Collection of Cambrian fossil Trilobites from Kashmir.*

## (2) *Permo-Carboniferous Fishs in Volcanic ash-beds from Kashmir.*

(Coll. D. N. Wadia.)

(5) *Ice-scratched pebbles from the Talchir Boulder-bed, Salt Range, Punjab.*

Ice-scratched pebbles from the Talchir series of the Salt Range, Punjab. These are the moraines left by the glaciers of Upper Carboniferous age capping the Archæan highlands of Rajputana. Some of the characteristic rock-types of Rajputana Aravallis are represented in this moraine material.

(Coll. E. R. Gee.)

(6) *A large crystal of quartz recently acquired by the Geological Survey of India.*

It comes from a locality between Pokhra and Mount Dhaulagiri in Nepal, and is said to have been found in snow-covered soil. It is a six-sided prismatic crystal whose terminations clearly show that it is twinned. It has a maximum length of 14 inches, thickness of 8 inches and weighs 44 lbs. (avoir.).

(7) *A set of specimens of manganese ore (mainly psilomelane) collected by Dr. E. Spencer of Messrs. Bird & Co., from their mines near Barabil in Kconjhar State. B. & O., and presented to the Geological Survey of India.*

They show very fine banding attributable to the deposition of ore by underground waters.

12. M. MAHFUZ-UL HAQ.

(1) *The Persian Dīwān of Nawwāb Shukr-ullāh Khan. Khāksār, an official of the Court of the Emperor Aurangzib.*

The MS. contains additions and emendations in the poet's own hand.

(2) *A Bayāz, or a selection of the verses of numerous Persian poets, made by Muhammad Bakhsh, Ashūb.*

The entire MS. is in the handwriting of the poet himself.

(3) *A Wasli, containing a specimen of Nast'aliq writing, by Mansā Rām, a Hindu Calligraphist of the 19th Century.*

13. SUNDER LAL HORA.

(1) *A fishing hook used for mud-fishing in Bihar.*

During October 1934, while staying at Pusa, I came across an ingenious device for catching mud-fishes, especially 'Ditch Eels' (*Mastacembellidæ*) and 'Snake-headed Fishes' (*Ophicephalidæ*). The fishes live at the bottom in marshy areas and are capable of directly breathing the atmospheric air. When the marshes begin to dry, they retire underground and aestivate.

The hooking device exhibited is lashed to a piece of bamboo stick of the desired length and strength for working in different depth of water. The hook is moved in the bottom mud close to the surface in an oblique direction sideways. As soon as some object is hooked,

the implement is pulled out and the object disengaged by a jerking movement. I was informed that in this way a maund or two of fish are sometimes caught by a single person in a day.

THE PRINCIPAL MUD-FISHES USUALLY HOOKED WITH THIS DEVICE ARE ALSO EXHIBITED.

(2) *An ingenious device used for crab-fishing at Uttarbhag, Lower Bengal.*

When the tide recedes from the muddy banks of the *Piali Nadi* at Uttarbhag, small boys are often seen pulling out crabs from holes by means of the fishing device exhibited. The implement consists of a blunt iron hook, lashed to a piece of split bamboo, the length of which depends upon the individual using it. When a crab hole is located, the hook-end is thrust into it and the rod is moved up and down till the crab is securely hooked. The swimming crab, *Scylla serrata*, which is also exhibited, is the principal food-species that is sought after in this way.

(3) *A diseased specimen of rainbow trout from Kashmir.*

In April 1934, there was a heavy mortality of rainbow trouts in the Kashmir Hatcheries, and it was noticed that only mature individuals of over 3 years of age were effected. The casualties included both cocks and hens, though the former suffered more.

The principal diagnostic features of the disease were (i) bulging eyes, (ii) edges of fins ragged and turned white, and (iii) large white marks below gills.

*Post-mortem* examination of the material showed that the fungus *Saprolegnia* was responsible for the epidemic. During the breeding period the males hollow out the spawning grounds by scattering pebbles, etc., by strokes of the fins. The females complete the task begun by the males. Bodily injuries are sustained during this process and bruises, wounds and abraded surfaces become liable to attacks by the fungus. The unusually mild winter of 1934 in Kashmir seems to have acted as a predisposing factor for the spread of the disease which had never been noticed in the valley before.

The remedy consisted of treating the hatcheries with a weak solution of Potassium permanganate, and of improving the sanitation of the hatcheries by the removal of weeds and the cleaning of shores. Within a short time the epidemic was successfully checked.

14. R. K. JALAN.

(1) *A beautiful manuscript of the Būstān of Sa'dī, with a double-page illuminated 'Unwān at the beginning, and variously-coloured gold-splashed margins.*

The manuscript which was transcribed by the famous calligraphist Sultān Husayn in 987 A.H. (1579 A.D.), contains four full page miniatures in the finest Persian style.

(2) *The Diwān of Hāfiẓ, copied in a beautiful Nasta'liq hand by Sultān 'Alī, in 981 A.H. (1573 A.D.).*

The manuscript which is preceded by the *Dibācha* of Hāfiẓ Gulandām, contains rich designs of birds, animals and human beings on the margin and 8 miniatures in fine Persian style.

(3) *Leaves from an illuminated MS. of the Qur'ān.*

The margins contain beautiful ornamental designs. The text is written in *Naskh* and the Persian translation in *Nasta'liq*.

(4) *A MS. of Muḥammad Kāzim's 'Alamgīr Nāma, containing fine miniatures in late Mughal style.*(5) *A MS. of Farīd-ud-Dīn 'Attār's Mantiq-ut-Tair, written in fine Nasta'liq and containing miniatures in early Timurid style.*

Not dated; apparently 9th century Hijra.

## 15. JOHAN VAN MANEN.

(1) *A Lhasa Maṇḍala.*

In Lhasa, in the market place near the Cathedral, there is a stūpa known as the Kani Gobshi. It is hollow and has four doors (go-bshi), hence the name. The ceiling of the inside chamber is covered by a fresco representing a maṇḍala. This stūpa, or chorten, has not yet been described in full. In consequence of a report concerning it the exhibitor has made the attempt to obtain detailed information. Through the great kindness of Mr. F. Williamson, I.C.S., Political Officer in Sikkim, Gangtok, he has received a coloured copy of the remarkable fresco made *in loco*. It represents the eleven-headed Avalokiteśvara in the centre, surrounded by four Buddhas. The seven precious gems are depicted around the latter in each of the four corners and are enclosed in a lotus garland. The maṇḍala itself is surrounded by a frieze showing the Green Tāra, eight times, in each half-quarter of the compass. Each Tāra has an attribute in the following order: elephant, lion, snake, fire, water, iron chain, pilgrim, and demon.

(2) *Six China Plates representing the three famous Buddhist Pilgrims.*

The plates exhibited represent the three famous Buddhist Pilgrims, Fa Hsien, Hsüan Tsang, and I Tsing. The period mark gives the date of manufacture as that of Hsüan Ho, the one but last Emperor of the first Sung Dynasty, i.e. A.D. 1119. Though this early date is unbelievable the unsolved problem of real date and origin is of interest.

(3) *Three large ferruginous concretions, composed mainly of limonite and haematite.*

These specimens are said to have come from some unspecified locality in China. Limonite is a common ore of iron, and is formed in meadows and marshes. It seems likely that these specimens were formed by the accretion of limonite around some substance which may since have disintegrated or been artificially removed, leaving the hollow shell of limonite.

The interest of the specimens lies in their unusual size, and their hollow core.

The Chinese love such freaks of nature and look upon them as objects of art. Hence the stands.

## 16. P. MITRA and J. K. GAN.

(1) *Kanam Mandible.*

Cast of the fragment of mandible discovered by Dr. L. S. B. Leakey in Kenya (East Africa) in 1931. Its age is considered to be the lower Pleistocene. In the opinion of Dr. Leakey this mandible represents a new species of Homo, which he has named Homo Kana-mensis. It approaches Homo Sapiens so closely that it is properly justified in regarding it as a true ancestor.

(2) *Casts of the Fragments and endocranial cast of Kanjera Skull No. 1 and Skull No. 3.*

Like No. (1), these remains were also unearthed by Dr. Leakey in Kenya in 1931. Age: Middle Pleistocene. These skulls are regarded as 'primitive generalised examples of true Homo Sapiens'.

(3) *Cast of a portion of Femur.*

It was discovered in association with Kanjera Skull No. 3. It lends further support to the opinion already held that Kanjera peoples are true Homo Sapiens.

(4) *Cast of the mandible of Propliopithecus hæckeli.*

This mandible was discovered in 1910 by Schlosser in the Oligocene deposits at Fayum in N. Egypt. It is considered to be very closely related to the Gibbons.

(5) *Cast of the Femur of Paidopithecus rhenanus Pohlig.*

It was discovered at Eppelsheim. Age: upper Miocene. It bears affinity, according to Seme, to Gibbons, according to others to Dryopithecus.

## 17. J. N. MUKHERJEE.

*'Colloidal preparation' including clay with beautiful colours.*

Brownian movement and microcataphoresis. Microphotographs of emulsions. Measurement of hydrogen ion concentration with indicators, etc. Active charcoal.

## 18. BARON OW-WACHENDORF, MINISTER PLENIPOTENTIARY AND CONSUL GENERAL FOR GERMANY, CALCUTTA.

*Roman and Indian Antiquities.*(1) *Epona, Gallo-Roman goddess of horsebreeding. II Cent. A.D. Luxemburg sandstone. Found at Dalheim, Grand Duchy of Luxemburg. Formerly in the collection of Dr. Kayser, who bequeathed it to the present owner.*

This deity was worshipped on both banks of the middle and upper Moselle as well as in the Ardennes. The figure is one of the finest and most typical of Gallo-Roman art. Casts taken from this original are exhibited in the museums of Cologne, Treves, and Bonn (Described in the publications of Prof. Krueger).

- (2) *Roman Head. II-III Cent. A.D. Found in the Crimea, formerly in the collection of Prince Woronzeff, sold in 1929 by the Soviets to the present owner.*

The remarkably well preserved head was obviously joined on to a bust of the same period, but belonging to another figure.

- (3) *Navagraha. Bihar, IX-X Century. The frieze shows Surya, Chandra, Mangala, Budha, Brihaspati, Shukra, Shani, Rahu and Ketu.*

A similar piece is in the Indian Museum, Calcutta.

- (4) *Stele, with central figure of the Buddha in the earth-witnessing attitude, surrounded by figures representing scenes from his life. Bihar, XI-XII Century.*

- (5-8) *Four bronze figures. Bihar, VIII-X Century.*

The inscribed green figure is almost identical with the famous Kurkihar bronzes in the Patna Museum. The small silver figure is of the greatest rarity. Only one other image of this date cast in silver is known (Stella Kraemersch, Pala and Sena Sculpture, Page 9).

- (9-12) *Four bronze figures of South Indian origin (Hyderabad, Madras, Bezwada), XV-XVII Century.*

- (13) *A bronze figure from Gaya, apparently of Chinese origin. Date uncertain.*

## 19. B. PRASHAD.

### *Habitat Group of Indian Storks.*

During 1934 the first Habitat Group of Indian Storks as observed at Samhon in the Etawah District was installed in the Bird Gallery of the Indian Museum. The two labels exhibited consist of (i) a coloured photograph of the case giving the names of the birds, plants, and other accessories in the case; and (ii) a descriptive label of the case.

Attention is invited to the novel way of protecting the photograph and the painted label by mounting them under glass slabs.

## 20. S. SUNDAR RAO.

### *Photographs and maps of Filarial Bancrofti and Guinea-worm.*

## 21. THE GENERAL SECRETARY.

- (1) *The Society's publications of 1934.*

- (a) *Bibliotheca Indica.*
- (b) *Catalogues.*
- (c) *Journal.*
- (d) *Proceedings, Indian Science Congress.*

(2) *Some acquisitions of interest to the Library during 1934.*

(a) Presentations.

(b) Purchases.

(3) *Some recent publications by Members of the Society.*

(a) N. G. Majumdar : *Explorations in Sind.* Delhi, 1934.

(b) St. Kramrisch : *Indian Sculpture.* Calcutta, 1933.

(c) R. S. Wauchope . *Buddhist Cave Temples in India.* Calcutta, 1933.

(d) S. C. Law : *Kālidāser Pākhī (in Bengali).* Calcutta, 1934.

(e) S. Lévi : *Sanskrit Texts from Bāli, Baroda,* 1933.

(f) G. A. Grierson : *A Manual of the Kashmiri Language,* 2 Vols. Oxford, 1911.

(g) A. C. Vidyabhusana . *Sarasvatī, Pt. I (in Bengali).* Calcutta, 1933/34.



## ANNUAL REPORT FOR 1934.

The Council of the Asiatic Society of Bengal has the honour to submit the following report on the state of the Society's affairs during the year ending the 31st December, 1934.

### 1. Ordinary Members.

*Gains and losses.*—These were as follows during the year :—

<i>Gains.</i>		<i>Losses.</i>	
New elections .. ..	49	Elections carried over ..	8
		Applications withdrawn ..	1
		Elections lapsed ..	3
		Deaths ..	5
		Resignations ..	11
		Rule 38 ..	8
		Rule 40 ..	7
Total .. ..	49	Total .. ..	43

Initial total 436; net gain 6; final total 442.

*Rule 38.*—This Rule, dealing with members whose subscriptions are in arrears, was strictly applied and the names of 8 Members were consequently removed from the roll for this cause.

*Membership List.*—The customary detailed cross-check of the membership lists with the membership card index was made at the end of the year.

*Non-resident Members.*—Their total at the end of the year was 112, leaving more than ever room for substantial expansion.

*Life-members.*—The total of our Life-members has increased by one and now stands at 57. One was lost by death; and two Ordinary Members compounded during the year.

*Deaths.*—This year the loss to the Society by death has been heavy. Amongst the distinguished and especially valued members lost to us, whose memory will be cherished, and for whose departure the Society is the poorer, the following may be mentioned :—

The Hon'ble Sir P. C. Mitter (Ordinary Member, 1924).  
 Rai Bahadur S. R. Kashyap (Ordinary Fellow, 1933).  
 Sir C. C. Ghose (Ordinary Member, 1924), a past President.  
 Kumar Manmatha Nath Mitter (Ordinary Member, 1906).  
 Dr. Ekendranath Ghosh (Life-member, 1918).

### 2. Associate Members.

During 1934 one Associate Member was lost by death :—

MM. Kamal Krishna Smrititirtha (1924).

The quinquennial period of membership of 4 terminated during the year, and of these, 3 were re-elected for a further period of 5 years.

The following new Associate Member was elected during the year :—

L. Bogdanov.

The present number stands at 6 ; statutory maximum 15.

### 3. Special Anniversary Honorary Members.

On the 15th January, 1934, the Society celebrated the 150th Anniversary of its foundation, and elected 12 Honorary Members, representing Science and Letters. They are :—

#### *Science.*

Baron Ernest Rutherford of Nelson,  
O.M., England.  
Professor Albert Einstein, U.S.A.  
M. A. Lacroix, Paris.  
Sir Sydney Burrard, K.C.S.I.,  
F.R.S., England.  
Dr. Henry Fairfield Osborn, Sc.D.,  
LL.D., New York.  
Dr Sir Sven Hedin, Sweden.

#### *Letters.*

Sir John Marshall, Kt., London.  
Dr. Rabindra Nath Tagore, Santi-  
niketan.  
Professor Taha Husain, Cairo.  
Professor Arthur Christensen,  
Denmark.  
Dr. J. Van Kan, Batavia, Java.  
H. R. H. Prince Damrong Rajanub-  
hab of Siam.

### 4. Institutional Members.

During the year the following institution was admitted to this class of membership :—

Bombay University Library, Bombay.

Their total number is 7.

### 5. Ordinary Fellows.

At the Annual Meeting held on the 5th February, 1934, the following Member was elected an Ordinary Fellow :—

D. N. Wadia.

We lost through death Prof. S. R. Kashyap, an Ordinary Fellow, 1933.

The names of the following two Ordinary Fellows, who had ceased to be members under Rule 40, at the end of 1934, have now been omitted from the list of Ordinary Fellows.

At the end of 1934 the number of Ordinary Fellows was 47 ; statutory maximum 50.

On the date prescribed by the regulations for the issue of nomination papers for the election of new Fellows there were no vacancies and consequently no election will take place in 1935.

### 6. Honorary Fellows.

During the year no scholars were newly elected Honorary Fellows, and none were lost by death or resignation.

Their number at the end of 1934 was 26; statutory maximum 30.

### 7. Obituary.

During the year the Society received to its great regret news of the death of the following distinguished relations :—

Le R. P. Henri de Pirey, Corresponding Member of the French School of the Far East, Hanoi.

Dr. Ernst Hartert, a recipient of the Joy Gobind Law Memorial Medal.

Rev. E. Blatter, S.J., a recipient of the Paul Johannes Bruhl Memorial Medal.

### 8. Condolences.

The Council expressed condolences to the relatives of the following distinguished personalities deceased during the year :—

The Hon'ble Sir P. C. Mitter, an Ordinary Member of the Society.

Sir C. C. Ghose, an ex-President and Council Member of the Society.

### 9. Council.

The Council met 13 times during the year. The attendance averaged 11 of the 20 component members.

The following resolutions of thanks were passed by the Council :—

To Members of the Anniversary Celebration Committees for their valuable labours.

To Mr. K. C. Mahindra for the exceedingly valuable work performed by him for the Society as its Treasurer.

To Sir David Ezra for the presentation of a copy of the Descriptive Catalogue of Hebrew and Samaritan Manuscripts in the Sassoon Library, London.

To the Educational Secretary, Bengal Government, for sanctioning the annual grant for the publication of the Sanskrit Manuscripts Catalogues.

To M. J. Delacour for his presentation to the Society of a copy of his work on 'The Birds of French Indo-China.'

To Sir Upendra Nath Brahmachari for a donation to meet a deficit in Sir William Jones Memorial Medal Fund.

To Dr. L. L. Fermor for arranging the General Lectures.

To Dr. S. L. Hora, Mr. J. B. Auden, Dr. Meghnad Saha, and Dr. M. R. Sahni, for delivering lectures to the Society.

To Dr. S. L. Hora for the progress made with the publication of the Journal.

To Dr. S. L. Hora for preparing a re-appropriation statement for the Society.

To Dr. S. L. Hora for the services rendered by him as Treasurer and for his careful preparation of the Budget estimates for 1935.

### 10. Office Bearers.

The changes in the Council during the year were as follows :—

Sir C. C. Ghose resigned his seat on the Council on the 30th April owing to ill-health.

The Hon'ble Sir B. L. Mitter was co-opted a Council Member on the 2nd July.

Mr. Johan van Manen, Acting Honorary Treasurer, *vice* Dr. S. L. Hora, absent, from 25-5-34 to 18-6-34.

Absences other than those mentioned above were :—

Mr. Dikshit, absent from 1-3-34 to 1-11-34.

Mr. Fawcus, absent from 4-4-34 to the end of the year.

Dr. Fernor, absent from 7-3-34 to 1-4-34; from 15-4-34 to 1-8-34; and from 25-9-34 to 24-10-34.

Dr. Heron, absent from 25-3-34 to 20-4-34 and from 27-11-34 to the end of the year.

Dr. J. N. Mukherjee, absent from 24-3-34 to 10-4-34.

Sir David Ezra, absent from 12-4-34 to 1-11-34.

Col. Chopra, absent from 14-4-34 to 12-8-34.

Mr. Haq, absent from 1-5-34 to 1-7-34 and from 6-10-34 to 15-11-34.

Sir U. N. Brahmachari, absent from 1-6-34 to 1-7-34 and from 10-10-34 to 1-11-34.

Dr. Guha, absent from 15-7-34 to the end of the year.

Dr. Prasad, absent from 14-8-34 to 31-8-34.

Sir B. L. Mitter, absent from 1-9-34 to 1-11-34.

### 11. Committees of Council.

The standing Committees of Council during the year, namely, the Finance, Publication, and Library, met monthly, except in March.

The following special sub-committees were appointed during the year :—

Finance Re-organization sub-committee.

Library Re-organization sub-committee.

Publication Re-organization sub-committee.

General Re-organization sub-committee.

Sub-committee for the foundation of the National Institute of Sciences of India.

During the year it was resolved to revive the functions of the Publication Committee as an active body with its own Secretary in application of Regulations 4 and 5.

The various committees met several times and will partly place their final recommendation before the Council, or have partly already done so.

### 12. Finance Committee.

The Finance Committee continued during the year to meet on dates different from, and a few days prior to, those of the Council Meetings.

A Special Meeting to frame the budget for the next year was held in December.

### 13. Office.

*Staff.*—Changes in and additions to the office staff were as follows: The services of Mr. H. A. Brown, Stenographer since 1931, were dispensed with owing to his continued illness, with effect from 1-11-34. Babu A. K. Naskar was appointed temporarily in his place on 6-10-34, and left towards the close of the year. Mr. K. Krishnan was provisionally taken in his place as Stenographer on 6-12-34. Messrs. T. V. V. Nathan and N. Norman were engaged on 10-11-34 and 23-11-34 respectively on probation as general assistants.

*Subordinate Staff.*—In the subordinate staff the following change took place: The old Jemadar, who was an employee of the Society in several capacities since 1900, died during January, and the Senior Chaprassi, Raghunandan Tewari, was appointed in his place. In addition to this, there were the usual minor changes which do not call for comment.

*Correspondence.*—This year the number of outgoing letters was 1,524 and that of incoming letters 2,628.

*Council Circulars.*—The number of Council and Committee circulars issued during 1934 was 121.

*Files.*—During the year intermittent work was continued with regard to our files, old and new, but no real progress can be reported.

*Stock-room.*—Labelling, bundling, and registration of the contents of the stock-room were kept up-to-date during the year for new publications. The stock-books for new accessions and for sales were kept up.

*Distribution.*—No change was made in the mode of distribution of our publications and notices.

*Address.*—Printed address labels remained in use and the system of constant revision and addition which has been adopted enables us to keep the printed addresses up-to-date, month by month.

*Card Register.*—The card registers of the Society's membership and of that of the Indian Science Congress were kept up-to-date and checked at the close of the year.

*Circulars and Forms.*—The number of these printed during the year was 75. About Rs. 753 were expended under this head.

*Office Furniture.*—One table for the despatcher and four wall-shelves for the library were acquired as also a magic lantern screen and four door-curtains.

*Office Manual.*—This still remains a desideratum.

*Arrangement.*—No change was made in the present disposition of the rooms and their contents.

#### 14. Rules and Regulations.

During the year no changes were made in the Rules of the Society. The Council framed Regulations for the award of the Calcutta Indian Science Congress Prize.

#### 15. Indian Science Congress.

*Twenty-first Session.*—The Twenty-first Annual Meeting of the Indian Science Congress was held in Bombay, from January 2nd to January 8th, 1934, under the patronage of His Excellency the Right Honourable Michael Herbert Rudolf Knatchbull, Lord Brabourne, G.C.I.E., M.C., Chancellor of the Bombay University and Governor of Bombay.

*President.*—Dr. Meghnad Saha, D.Sc., F.R.S., F.A.S.B., University Professor of Physics, Allahabad, was President of the Congress.

*Proceedings.*—The *Proceedings* of the Congress were published in the second week of December. The publication contained 544 pages which was 24 pages of letterpress less than the year before. The number of abstracts sent in for reading to the Congress numbered this year 626 as against 705 last year.

*Administration*—During the latter months of the year the usual administrative work for the Congress in connection with the next Session (Twenty-second Congress) to be held in Calcutta was performed by the Society's office, which also attended to the general administration of the Congress when this was not in session. This year the burden of work thrown on the Society's office was exceptionally heavy.

*Programme and Abstracts.*—As in the previous years the programme of the meeting and the abstracts were sent, as far as was practicable, by post to all Members who had applied for membership before the date of their publication. This year this date was again late, the 19th December.

*Finance.*—The Congress finances remained separate from those of the Society.

*General Secretaries.*—The General Secretaries to the Congress were Dr. S. P. Agharkar and Mr. W. D. West.

#### 16. Indian Museum.

The Society's representative on the Board of Trustees of the Indian Museum, under the Indian Museum Act X of 1910, continued to be Rai Sir Upendra Nath Brahmachari Bahadur, Kt., who was re-appointed as such for a further period of three years.

#### 17. Kamala Lectureship.

The Council's nominee to serve on the Selection Committee of the Kamala Lectureship, administered by the Calcutta

University, remained the same, Rai Sir Upendra Nath Brahmachari Bahadur, Kt.

### 18. Deputations.

The Society received invitation to send representatives to various functions of the undermentioned body:—

International Congress of Anthropological and Ethnological Sciences.

The Council invited Dr. B. N. Guha, R. B. R. Chanda, and Rev. P. O. Bodding to represent the Society.

### 19. Honours.

Amongst the Honours conferred during the year several were bestowed on members of the Society. Dr. U. N. Brahmachari and Mr. A. Howard received the honour of Knighthood. Col. Chopra was made a C.I.E.; and Dr. J. Ph. Vogel an Honorary C.I.E. While the distinction of Officier de l'Instruction Publique was conferred on the General Secretary by the French Government.

### 20. Congratulations.

The Society sent its cordial congratulations to Lt.-Col. R. B. S. Sewell and Dr. L. L. Fermor on being elected Fellows of the Royal Society.

Congratulations were also sent to several of the above recipients of Civic Honours.

### 21. Visits.

An appreciable number of distinguished visitors came to the Society during the year. Amongst them were scholars from Sikkhim, England, France, Austria, Switzerland, Germany, Holland, Hungary, and the United States of America.

Mr. Ram Chandra, C.I.E., M.B.E., I.C.S., Joint Secretary, Department of Education, Health and Lands, Government of India, visited the Society in March.

### 22. Social Functions.

On the 15th January, in connection with the Society's 150th Anniversary Celebrations, a conversazione was held in the quadrangle of the Indian Museum at 5-30 p.m. Light refreshments were served to the members and invited guests and the function which was numerously attended was a great success.

On the same day at 8 p.m. there was a banquet in the Society's rooms. A select gathering was present at the banquet and the Chief Guest was H.E. The Rt. Hon'ble Sir John

Anderson, P.C., G.C.B., G.C.I.E., Patron of the Society. There were also numerous representatives from foreign and Indian Societies.

The President generously enabled the Society to maintain the traditional practice of providing light refreshments to the Members present before the Ordinary Monthly Meetings.

### **23. Elliott Prize for Scientific Research.**

The annual prizes for 1933 and 1934 for research in Chemistry and Physics, respectively, will be announced in the Annual Meeting of 1935.

The prize for next year, 1935, will be for research in Geology and Biology (including Pathology and Physiology).

### **24. Barclay Memorial Medal.**

The (biennial) award of the Barclay Memorial Medal for 1933 was announced in the Annual Meeting of 1934. The medal was bestowed on Dr. R. Row.

The next award will be made in 1936.

### **25. Sir William Jones Memorial Medal.**

The next (biennial) award of the Sir William Jones Memorial Medal for 1934, for Asiatic Researches in Science, will be announced in the Annual Meeting of 1935.

### **26. Annandale Memorial Medal.**

The (triennial) award, for important contributions to the study of Anthropology in Asia, was announced in the Annual Meeting of 1934. The medal was bestowed on Dr. Eugène Dubois.

The next award will be announced in the Annual Meeting in February, 1937.

### **27. Joy Gobind Law Memorial Medal.**

The next (triennial) award of the medal for conspicuous important work on Zoology in Asia will be announced in the Annual Meeting in February, 1936.

### **28. Paul Johannes Brühl Memorial Medal.**

The (triennial) award for important contributions to the study of Asiatic Botany will be announced in the Annual Meeting in February, 1935.



### **29. Calcutta Indian Science Congress Prize.**

The first award of the prize will be announced in the Annual Meeting in February, 1935.

### **30. Society's Premises and Property.**

A sum of Rs. 2,000 was set aside during the year to be credited to the Building Repairs Fund.

During the year some petty repairs to the Society's building were effected. There was a slight outbreak of fire in the Society's building on the 18th September on account of the fusing of the electric wires. The Council decided to have the whole wiring renewed.

The various desiderata and problems existing under the heading Premises and Property have been mentioned in the Annual Reports of the last few years and have to be kept in mind until realization.

### **31. Accommodation.**

Old problems to be carried over as still needing attention are: the provision of a set of small work-rooms for various uses, and the shelving of the stock-rooms.

### **32. Artistic and Historical Possessions.**

No notable accessions were added during the year to the artistic and historical possessions of the Society.

### **33. Presentations, Donations, and Legacies.**

Except for the presentations to be mentioned under the next heading the Society received a further donation from Sir Upendra Nath Brahmachari, Kt., to meet a deficit for the year in Sir William Jones Memorial Medal Fund.

### **34. Library.**

*Permanent Library Endowment Fund.*—The fund received no further donation during the year. The total invested capital remained (face value) Rs. 13,000, in 3½ per cent. Government paper. The accumulated interest will permit the purchase of one further paper to the face value of Rs. 1,000 during next year.

*Accessions.*—The accessions to the library during the year, exclusive of about 200 periodicals received through exchange or otherwise, numbered 218 volumes, out of which 131 were purchased and 87 were acquired by presentation.

The allocation for the purchase of books for the year was Rs. 2,000, but actually an amount of Rs. 1,982 was spent. For the new year the grant has been fixed at Rs. 2,000.

*Binding.*—During the year 514 units, including books, pamphlets, and periodicals, were bound at a cost of Rs. 613, out of a total budget allowance of Rs. 750 sanctioned for the purpose.

*Catalogue.*—The new Author Catalogue of printed books in European Languages was published during the year.

*Shelving.*—A new reference shelf was added during the year to keep the more important works of reference. Installation of special steel shelving for manuscripts and books in the western section remains to be effected, and provision has also to be made for further steel shelving for the current accessions of periodical literature. Our available shelving space for printed books is also rapidly coming to an end.

### 35. Finance.

(1) Appendix III contains the usual statements showing our accounts for 1934. No change has been made in the form of their presentation since the previous year. No new statement occurs.

(2) One statement, still carried over without change from the previous year pending final ascertainment of commitments, is :—

Statement No. 16, International Catalogue of Scientific Literature, London.

(3) The other statements are presented as in the previous year and do not call for special comment.

(4) The fund accounts again show their invested assets written down to the market values as at the end of the year, and the Investment Account, Statement No. 23, shows the allocation of invested paper to each fund specifically, whilst both market and face values of the investments are shown in it.

(5) Statement No. 25 shows the Balance Sheet of the Society and the different funds administered by and through it.

(6) The funds belonging to, or administered by, the Society may be classified as follows :—

(a) General Fund.

(i) Permanent Reserve.

(ii) Working Balance.

(b) Specific Funds belonging to the Society.

(c) Funds administered by the Society.

At the end of the year, the position of these funds, as compared with their position at the end of 1933, was as follows :—

	Face Value.	Market Value.	Face Value.	Market Value.
	31st Dec., 1933.	31st Dec., 1933.	31st Dec., 1934.	31st Dec., 1934.
1. General Fund ..	3,02,000	2,56,800	2,99,100	2,93,300
(a) Permanent Reserve	2,49,200	2,11,700	2,51,100	2,46,700
(b) Working Balance ..	52,800	44,900	48,100	46,600
2. Specific Funds belonging to the Society ..	45,000	40,000	46,600	45,400
3. Funds administered by the Society ..	28,000	25,000	29,500	28,800
	3,75,000	3,21,600	3,75,200	3,67,500

(7) During the year Rs. 1,136 were received through admission fees. Two members compounded their subscriptions to a total of Rs. 600. One new Institutional member was admitted. The fee of Rs. 50 together with the above amounts, as well as a sum of Rs. 23-15 cash balance which was brought forward from 1933, under this head, in all aggregating to Rs. 1,809-15 was transferred to the Permanent Reserve in the usual manner, by conversion at the market rates as on 31st December, 1934, of Government 3½ per cent. Paper to the face value of Rs. 1,800 belonging to the Temporary Reserve of the working balance, whilst a cash balance of Rs. 61-11 is being carried over to the ensuing year, for adjustment under this head.

(8) The Government of Bengal maintained the 20 per cent. cut in all grants made by them to the Society during the year.

The Society received the following grants from the above Government :—

For	Rs.	Statement.
Journals ..	1,600	1
O.P. Fund, No. 1 ..	6,600	2
O.P. Fund, No. 2 ..	2,400	3
Sanskrit MSS. Fund (for 1934-35) ..	2,880	4
Do. (for 1933-34) ..	2,560	4
	16,040	

(9) The income derived from advertising during the year amounted to Rs. 9,600.

(10) The temporary investments of funds in Fixed Deposit and Savings Bank are shown in Statement Nos. 21 and 22.

(11) Statement No. 19 gives an account of the amounts due to and by the Society for membership subscriptions, sales of publications, and contingent charges.

(12) The Government Securities shown in Statement No. 23, are held in safe custody by the Imperial Bank, Park Street Branch. During the year, there was a further appreciation of

the Securities amounting to Rs. 48,007-12, affecting to that extent the book assets of the Society.

(13) The budget estimates for 1934 and the actuals for the year were as follows :—

Estimates.		Receipts.	Expenditure.
		Rs.	Rs.
Ordinary	..	69,500	69,500
Extraordinary	..	850	850
TOTAL		70,350	70,350
Actuals.			
Ordinary	..	70,676	63,636
Extraordinary	..	1,754	1,754
TOTAL		72,430	65,390

The ordinary income was about Rs. 1,176 more than estimated.

On the expenditure side also about Rs. 5,864 was expended less than the estimate.

(14) The year's working shows an improvement in the net balance by Rs. 32,357 as compared to that of last year taking into account the appreciation of our investments.

(15) The budget estimates for probable expenditure has as usual been framed to meet demands under various heads based on vigorous activity in all departments of the Society's work and a further special allocation has been made to the heading Journal with a view to make good its arrears during the coming year.

The receipts have been conservatively estimated.

An appendix presents the accounts connected with the celebration of the 150th Anniversary of the Society.

#### BUDGET ESTIMATES FOR 1935.

##### Ordinary Receipts.

	1934 Estimate.	1934 Actuals.	Budget Estimate for 1935.
	Rs.	Rs.	Rs.
Interest on Investments and Deposits {	10,000	10,013	10,000
	500	807	800
Advertising .. .. .	9,600	9,600	9,600
Annual Grant .. .. .	1,600	1,600	1,600
Miscellaneous .. .. .	500	270	300
Members' Subscriptions .. .. .	9,500	9,823	9,500
Publications, Sales and Subscriptions	4,500	5,263	5,000
Proportionate Share of Funds ..	7,000	7,000	7,000
Indian Science Congress Contribution	..	..	600

		1934 Estimate.	1934 Actuals.	Budget Estimate for 1935.
		Rs.	Rs.	Rs.
Appropriation from the Temporary Reserve Fund as—				
(1) For Journal and Pro.	13,500	17,000	17,000	..
(2) For Library Catalogue	1,500			
(3) For Jubilee Celebrations .. ..	2,000			
Rent .. ..	..	9,300	9,300	9,300
<b>TOTAL ..</b>	<b>..</b>	<b>69,500</b>	<b>70,676</b>	<b>53,700</b>

### Ordinary Expenditure.

		Rs.	Rs.	Rs.
Salaries and Allowances .. ..	..	31,500	31,320	30,000
Commission .. ..	..	300	256	300
Stationery .. ..	..	600	409	500
Fan, Light and Telephone .. ..	..	00	798	800
Taxes .. ..	..	2,250	2,244	2,250
Postage .. ..	..	1,750	1,702	1,400
Freight .. ..	..	100	..	100
Contingencies .. ..	..	850	841	900
Petty Repairs .. ..	..	100	140	100
Insurance .. ..	..	500	500	500
Menials' Clothing .. ..	..	150	188	100
Office Furniture .. ..	..	400	373	450
Artistic Possessions .. ..	..	100	..	..
Building Repairs .. ..	..	2,000	2,000	2,000
Provident Fund Share .. ..	..	700	682	700
Audit Fee .. ..	..	250	250	250
Books, Library .. ..	..	2,000	1,982	2,000
Binding, Library .. ..	..	750	613	650
Journal and Memoirs .. ..	..	20,000	16,337	9,900
Printing, Circular .. ..	..	1,000	753	800
Library Catalogue .. ..	..	1,500	2,202	..
Jubilee Celebrations .. ..	..	2,000	..	..
Income Tax .. ..	..	..	246	..
<b>TOTAL ..</b>	<b>..</b>	<b>69,500</b>	<b>63,636</b>	<b>53,700</b>

### Extraordinary Receipts.

		Rs.	Rs.	Rs.
By Fees				
by Admission Fees .. ..	..	500	1,104	650
by Compounding Fees .. ..	..	300	800	300
by Institutional Membership Registration Fees .. ..	..	50	50	50
<b>TOTAL ..</b>	<b>..</b>	<b>850</b>	<b>1,754</b>	<b>1,000</b>

**Extraordinary Expenditure.**

	1934 Estimate.	1934 Actuals.	Budget Estimate for 1935.
To Permanent Reserve	Rs.	Rs.	Rs.
by Admission Fees .. ..	500	1,104	650
by Compounding Fees .. ..	300	600	300
by Institutional Membership Registration Fees .. ..	50	50	50
TOTAL ..	850	1,754	1,000

**36. Publications.**

*Journal.*—Of the *Journal and Proceedings*, Vols. XXIX, and XXX for 1933 and 1934 respectively, six numbers constituting nearly two complete volumes were issued aggregating 878 pages and 32 plates. The title-pages and index for Vol. XXIX were also published.

Thanks to the energetic labours of Dr. S. L. Hora much progress was made with the wiping out of arrears in the publication of the *Journal* and the prospects are that in 1935 the publication will be brought entirely up-to-date.

The Council decided to split up the *Journal*, to begin with the volume for 1935, into two separate parts, for Science and Letters.

*Indian Science Congress.*—The *Proceedings* of the 21st Indian Science Congress, consisting of 544 pages, were published during the year.

*Special publications.*—During the year one volume (the seventh) of the Sanskrit MSS. Catalogue (Kāvya) was published and also the Author Catalogue of printed book in European Languages in the library of the Society; these are dealt with separately elsewhere in this report.

*Sales.*—A sum of Rs. 5,250 was realized, being Rs. 750 above the budget estimate.

*Expenditure.*—The expenditure on *Journal* and *Memoirs* was about Rs. 16,337.

*Advance Proceedings and Notices.*—The Council decided to commence the issue of a new periodical under the above title which explains itself. It is to be published in the interval between any two Monthly Meetings of the Society and to be distributed only to the Members. Three numbers have appeared during the year.

*Year Book.*—The Council decided to give the sub-title of *Year-book* to the *Proceedings* of the Society.

**37. The Baptist Mission Press.**

Under the capable superintendence of Mr. P. Knight the Baptist Mission Press continued to act as our chief printers

and again gave invaluable assistance and maintained closest co-operation.

### 38. Agencies.

Our European and Indian Agents remained the same throughout the year.

### 39. Exchange of Publications.

During the year, the following application for an exchange with the Society's publications was considered by the Council, with the decision as noted against it :—

<i>Publications of :</i>	<i>To be exchanged with :</i>
Ostasiatiska Samlingarna, Stockholm.	<i>Bibliotheca Indica.</i>

### 40. Meetings.

The Ordinary Monthly Meetings of the Society were held regularly every month, with the exception of April and the recess month of October. The recorded average attendance was 16 members and 3 visitors. The maximum attendance was in December with 26 members and 4 visitors.

Two meetings of the Medical Section were held during the year.

### 41. Exhibits.

In the Ordinary Monthly Meetings a number of exhibits were shown and commented upon by the exhibitors. The following may be mentioned :—

M. S. Mani : An interesting case of Cladode-formation in certain Plants due to the attack of gall-forming Organisms; and the 'wireless' asexuals of gall-midges.

Johan van Manon : An interesting and rare Artifact found in a Jungle in the Ho Country; and six China plates representing the three famous Buddhist Pilgrims.

L. L. Fermor : Four specimens of Deccan Trap Basalts and Dolerites from the Chhindwara District, C.P.

M. S. Krishnan : The Bahjoi Meteoric Iron; and The Khanpur Meteorite.

S. L. Hora : Sun-shades of Fishes.

Suniti Kumar Chatterji : Three small Bronzes from West Africa.

Cyril S. Fox : A portable Electroscope for ascertaining the Radio-activity of spring Waters, natural Gases, and Minerals.

K. N. Dikshit : Four Coins.

D. N. Wadia : Specimens of fossiliferous Limestone of Eocene Age associated with volcanic Rocks at the Crest of the Great Himalaya Range, Burzil Valley, Kashmir.

### 42. Communications.

Apart from papers submitted both for reading and subsequent publication, a number of communications, not intended

for subsequent publication, were made from time to time in the Ordinary Monthly Meetings.

Amongst such communications made during the year the following may be mentioned :—

Baini Prashad: Harappa Animal Remains.

S. L. Hora: Fish Slime and Precipitation of suspended Mud in Water.

J. N. Mukherjee: Fish Slime and Precipitation of suspended Mud in Water.

S. P. Roy Choudhury: A note on the precipitating Action of Slime Water obtained from Bora Fish.

### 43. General Lectures.

Four General Lectures were held during the year before fairly numerous audiences of members and invited guests. They were as follows :—

S. L. Hora: Trade in Live Fish (Jiol Machh) in Calcutta. 31st August.

J. B. Auden: The North Bihar Earthquake of the 15th January, 1934. 7th September.

Meghnad Saha: The fundamental Constituents of Matter. 15th September.

M. R. Sahni: The Shan Hinterland: the Country and its People. 21st September.

### 44. Philology.

Five papers were read during the year to be published later.

Twelve papers read in the previous years were published during the year.

Four papers were read and also published during the year.

### 45. Natural History : Biology.

Four papers read in the previous years were published during the year.

Three new papers were read and published during the year.

One paper was read during the year to be published later.

### 46. Natural History : Physical Science.

Two papers were read and published during the year.

One paper was read during the year to be published later.

### 47. Anthropology.

Five papers read in the previous years were published during the year.

Six new papers were read and published during the year.

One paper was read during the year to be published later.



#### 48. Medical Section.

During the year two meetings of the Medical Section were held, as detailed below :—

September. Speaker : Lt.-Col. R. Knowles.  
Subject : Mosquito Density and Mosquito-borne Diseases in Calcutta City; and Nuclear Division in Malaria Sporozoites.

October. Speaker : Lt.-Col. R. N. Chopra.  
Subject : Blood Changes in Opium Addicts.

Speaker : Lt.-Col. R. Knowles.  
Subject : Spirochæte in Guinea-pig.

The recorded attendance averaged 3 members and 30 visitors.

#### 49. Bibliotheca Indica.

*Works published.*—No new work was published during the year.

*Indian works continued.*—The following works were continued during the year :—

Manusmṛti, with the commentary of Medhatithi, Sanskrit.  
Vaikhānasaśrautasūtram, text, Sanskrit.

*Islamic works continued.*—In the Islamic Series work was continued on four works, namely :—

1. 'Amal-i-Šālih, Persian.
2. Tabaqāt-i-Akbarī, Persian.
3. Kashafu'l-Hujub, Part II, Arabic.
4. Rubā'iyāt of Umar-i-Khayyām, Persian.

Careful husbanding, during a protracted period, of the financial resources at the Society's disposal for the issue of the series reduced the undesirable huge debit balance of late years to an insignificant amount at the end of the year.

#### 50. Catalogue of Sanskrit Manuscripts.

Volume VII, on Kāvya, was finished and published during the year. It is a volume of 674 pages, containing descriptions of 859 numbers. Volume VIII, on Tantra, is well advanced. By the end of the year 112 pages of it were printed off and about 72 pages were in type.

The Government grant for the period was renewed late in the year and measures were taken to ensure regular further progress in future.

#### 51. Arabic and Persian Manuscripts, Search and Catalogue.

The work in this department was steadily pursued.

*Binding.*—The binding and repairing of previously and newly acquired MSS. was continued and 48 MS. volumes were

bound during the year, making a total of 1,058 MSS. bound and repaired since the end of 1924.

*Acquisitions.*—During the year forty manuscripts were acquired by purchase. A total amount of Rs. 545 was spent on these new acquisitions.

Late in the year the 1,000th new MS., since regular purchase was resumed in 1924, was added to the collection.

*Reference books.*—The collection of Persian and Arabic MSS. catalogues was again added to and its completion continues an object of attention.

*Catalogue.*—Since 1931 the work on the Catalogue of Arabic Manuscripts has been in suspense. In August, the Council made arrangements with Shams-ul-Ulama Dr. M. Hidayat Hosain to continue the work.

## 52. Numismatics.

One Numismatic Supplement (for 1931-1933) was published during the year, aggregating 42 printed pages and 5 plates. The Supplement for 1934 is in type and will be published early in 1935.

## 53. Anniversary Celebrations.

On the 15th January the Society celebrated the 150th Anniversary of its foundation.

In the afternoon a *conversazione*, together with an exhibition, was arranged in the Indian Museum. In the evening a banquet was held in the Society's hall with His Excellency the Governor of Bengal, Patron of the Society, as the Chief Guest. Some 85 members and representatives of learned Societies attended. After the banquet a Special Anniversary Meeting was held in which the Patron and the President delivered speeches. The General Secretary then read congratulations received from His Excellency the Viceroy, the Mayor of Calcutta, Honorary Fellows, and the League of Nations. 28 representatives of learned Societies conveyed congratulatory messages, after which some 40 greetings received by letter and telegram were communicated.

It was further resolved to prepare a Memorial Volume describing the Society's activities during the last half century in continuation of the previously published Centenary Volume, and to call for a vote from the general body of members concerning the desirability to apply for receipt of a Royal Charter from His Majesty.

In memory of the occasion twelve Special Anniversary Honorary Members were elected

#### **54. Royal Charter.**

The Council decided to take a vote of the general body of Members of the Society on the question of the desirability to apply for the receipt of a Royal Charter by the Society. The vote was overwhelmingly in favour of the proposal. Subsequently it was found that there is a technical difference between 'incorporation by Royal Charter', to be considered by His Majesty's Privy Council, and the bestowal by His Majesty of the title 'Royal' on the Society. As it was the latter distinction that was intended, the matter will be dealt with accordingly during the current year.

#### **55. National Institute of Sciences of India.**

The Indian Science Congress constituted a Committee to consider the creation of a National Institute of Sciences of India. The Society placed its rooms at the disposal of the Committee for its meetings and was itself represented on it. The Committee terminated its labours during the year and early in 1935 the Institute was duly founded. The Society decided to offer hospitality for its office to the new Institute in its early career.

# [APPENDIX I]

## Membership Statistics.

(As calculated for December 31st, for 30 years.)

YEAR.	ORDINARY.							EXTRA-ORDINARY.					FELLOWS.			
	PAYING.				NON-PAYING.			Total Ordinary Members.	Centenary Honorary.	Associate.	Institutional.	Anniversary Honorary.	Grand Total Membership.	Honorary.	Ordinary.	
	Resident.	Non-Resident.	Foreign.	Total.	Absent.	Life.	Total.									
1905 ..	144	133	12	288	48	20	68	356	4	13	..	..	17	373	29	..
1906 ..	173	147	15	335	52	20	72	407	4	12	..	..	16	423	30	..
1907 ..	174	175	20	369	31	20	51	420	4	12	..	..	16	436	28	..
1908 ..	181	193	17	391	38	19	57	448	4	13	..	..	17	465	30	..
1909 ..	183	217	13	413	40	20	60	473	4	14	..	..	18	491	28	..
1910 ..	209	217	16	442	43	23	66	508	4	14	..	..	18	526	27	17
1911 ..	200	225	19	444	53	22	75	519	3	14	..	..	17	536	28	19
1912 ..	203	229	19	451	43	23	66	517	3	13	..	..	16	533	27	24
1913 ..	200	211	19	430	46	23	69	490	3	14	..	..	17	516	27	28
1914 ..	191	187	19	397	50	26	76	473	3	14	..	..	17	490	24	27
1915 ..	171	188	21	380	40	25	65	445	3	15	..	..	18	463	29	31
1916 ..	145	159	18	322	60	25	85	407	3	15	..	..	18	425	26	33
1917 ..	150	144	15	309	45	24	69	378	2	12	..	..	14	392	22	35
1918 ..	153	145	17	315	43	24	67	382	2	10	..	..	12	394	22	39
1919 ..	141	128	15	284	64	25	89	373	2	11	..	..	13	386	18	36
1920 ..	161	134	15	310	32	26	58	368	2	11	..	..	13	381	28	38
1921 ..	160	132	16	308	26	26	51	359	2	12	..	..	14	373	28	40
1922 ..	160	141	16	317	26	26	52	369	2	13	..	..	15	384	30	39
1923 ..	147	120	13	280	30	27	57	337	2	11	..	..	13	350	28	37
1924 ..	209	134	12	355	29	28	57	412	2	12	..	..	14	426	27	37
1925 ..	263	137	12	412	23	27	50	462	2	12	..	..	14	476	26	34
1926 ..	319	162	20	501	23	28	51	552	2	12	..	..	14	566	25	34
1927 ..	328	167	18	513	28	33	61	574	2	13	..	..	15	589	28	38
1928 ..	344	167	23	534	42	46	88	622	1	12	..	..	13	635	28	40
1929 ..	331	181	21	533	36	49	85	618	1	10	2	..	13	631	27	43
1930 ..	291	194	37	522	22	52	74	596	1	8	2	..	11	607	29	47
1931 ..	228	184	29	441	26	52	78	519	1	8	5	..	14	533	29	46
1932 ..	222	126	23	371	27	54	81	452	1	7	5	..	13	465	28	45
1933 ..	194	126	27	347	33	56	89	436	..	7	6	..	13	449	26	49
1934 ..	217	113	30	359	26	57	83	442	..	6	7	12	25	467	26	47

## [APPENDIX II]

### List of Publications issued by the Asiatic Society of Bengal during 1934.

#### (a) Journal and Proceedings (New Series) :

			Price.		
			Rs. A. P.		
Vol. XXIX : No. 1 (35 units)	..	..	13	2	0
Vol. XXIX : No. 2 (12 .. )	..	..	4	8	0
Vol. XXIX : No. 3 ( 8 .. )	..	..	3	0	0
Vol. XXIX : No. 4 (10 .. )	..	..	3	12	0
Vol. XXX : No. 1 (18 .. )	..	..	6	12	0
Vol. XXX : No. 2 ( 9 .. )	..	..	3	6	0

Title pages and Index for Vol. XXIX. (Free to Members and Subscribers on application.)

#### (b) Miscellaneous :

Proceedings, Twenty-first Indian Science Congress ..	12	12	0
Descriptive Catalogue of the Sanskrit MSS. in the collection of the Asiatic Society of Bengal, Vol. 7.			
Kāvya .. .. .	10	0	0
Author Catalogue of Printed Books in European Languages in the Library of the Asiatic Society of Bengal .. .. .	10	0	0

Abstract Statement  
of  
Receipts and Disbursements  
of the  
Asiatic Society of Bengal  
for  
the Year 1934

## STATEMENT No. 1.

1934.

*General*

## Income and Expenditure Account

			Rs.	As.	P.	Rs.	As.	P.
<b>TO ESTABLISHMENT.</b>								
Salaries and Allowances	..		31,319	13	0			
Commission	..	..	256	6	3			
						31,576	3	3
<b>GENERAL EXPENDITURE.</b>								
Stationery ..	..	..	409	4	0			
Fans and Light	..	..	509	3	6			
Telephone ..	..	..	289	2	3			
Taxes ..	..	..	2,244	7	0			
Postage ..	..	..	1,502	8	0			
Contingencies	..	..	841	5	9			
Printing Circulars, etc.	..	..	753	7	0			
Audit Fee ..	..	..	250	0	0			
Petty Repairs	..	..	139	14	0			
Insurance ..	..	..	500	0	0			
Menials' Clothing	..	..	188	4	0			
Furniture ..	..	..	373	0	0			
						8,000	7	6
<b>LIBRARY AND COLLECTIONS.</b>								
Books ..	..	..	1,981	14	8			
Binding ..	..	..	613	0	0			
						2,594	14	8
<b>PUBLICATIONS.</b>								
Journal and Proceedings and Memoirs			16,337	1	9			
Library Catalogue ..	..	..	2,201	14	0			
						18,538	15	9
<b>CONTRIBUTIONS TO FUNDS.</b>								
Provident Fund Contribution for 1934			....			682	5	0
Building Repair Fund Account	..	..	....			2,000	0	0
<b>INCOME TAX ..</b>								
	..	..	....			246	5	0
<b>JUBILEE CELEBRATIONS ..</b>								
	..	..	....			3,465	14	3
<b>SUNDRY ADJUSTMENTS.</b>								
Bad Debts written-off ..	..	..	....			847	4	0
Balance as per Balance Sheet	..	..	....			2,76,691	3	0
<b>TOTAL ..</b>								
						3,44,643	8	5

## STATEMENT No. 1.

Fund.

1934.

for year to 31st December, 1934.

---

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	....			2,44,334	14	11

## CASH RECEIPTS.

Interest on Investments	..	10,013	8	0			
Advertising	..	9,600	0	0			
Interest on Fixed Deposits	..	807	15	9			
Miscellaneous	..	270	10	6			
Government Allowance	..	1,600	0	0			
Donations	..	1,726	0	0			
Rent	..	9,300	0	0			
		-----			33,318	2	3

## PERSONAL ACCOUNTS.

Members' Subscriptions	..	10,796	0	0			
Compounding Subscriptions	..	600	0	0			
Admission Fees	..	1,136	0	0			
Institutional Membership Fees	..	50	0	0			
Miscellaneous	..	11	1	0			
		-----			12,595	1	0

## TRANSFERS FROM FUNDS.

Proportionate Share in General Expenditure	..	7,000	0	0			
Publication Fund for Publications	..	4,230	2	3			
		-----			11,230	2	3
Appreciation of Govt. Securities revalued on 31-12-34	..	....			43,165	4	0

TOTAL .. 3,44,643 8 5



## STATEMENT No. 2.

1934.

*Oriental Publication*

From a monthly grant made by the Government of Bengal for the publi-  
(Rs. 500), and for the publication of Sanskrit  
(Less 20% from the

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Account ..	....			3,802	14	1
Printing .. ..	....			172	0	0
Proportionate Share in General Expenditure .. ..	..	..	..	2,500	0	0
Balance as per Balance Sheet ..	...			125	1	11
TOTAL ..				6,600	0	0

## STATEMENT No. 3.

1934.

*Oriental Publication*

From a monthly grant made by the Government of Bengal of  
Historical  
(Less 20% from the

	Rs.	As.	P.
To Balance from last Account ..	2,300	6	4
Editing .. ..	600	0	0
TOTAL ..	2,900	6	4

## STATEMENT No. 4.

1934.

*Sanskrit Manuscripts Fund*

From an annual grant of Rs. 3,200 made by the Government of Bengal  
by the Society; and Rs. 3,600 from the  
(Less 20% from the

	Rs.	As.	P.	Rs.	As.	P.
To Pension .. ..	120	0	0			
Printing .. ..	685	13	0			
Proportionate Share in General Expenditure .. ..	...			805	13	0
Balance as per Balance Sheet ..	...			2,000	0	0
				16,694	1	3
TOTAL ..				19,499	14	3



## STATEMENT No. 5.

1934.

*Arabic and Persian Manuscripts*

From an annual grant of Rs. 5,000 made by the Government of India for  
by the Society; for the purchase of further Manuscripts,  
Manuscripts found in

	Rs.	As.	P.	Rs.	As.	P.
To Manuscripts Purchase .. ..	378	0	0			
Binding .. ..	95	0	0			
*Cataloguing .. ..	935	7	6			
	<hr/>			1,408	7	6
Proportionate Share in General Ex- penditure .. ..	....			2,500	0	0
Balance as per Balance Sheet .. ..	....			4,536	9	0
	<hr/>					
TOTAL ..				8,445	0	6

## STATEMENT No. 6.

1934.

*Barclay Memorial*

From a sum of Rs. 500 odd given in 1896 by the Surgeon  
encouragement of Medical

	Rs.	As.	P.	Rs.	As.	P.
To Cost of a Medal .. ..	....			27	10	0
Balance as per Balance Sheet—						
Rs. 400, 3½% G.P.N., 1854-55	679	14	0			
" 100, " " 1900-01						
" 100, " " 1865						
" 100, " " 1854-55						
Less Deficit for the year ..	21	12	2			
	<hr/>			658	1	10
	<hr/>					
TOTAL ..				685	11	10

## STATEMENT No. 7.

1934.

*Servants' Pension Fund*

Founded in 1876 as the Piddington Pension Fund

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 2,000, 3½% G.P.N., 1879	2,719	8	0			
" 500, " " 1854-55						
" 300, " " 1854-55						
Surplus for the year .. ..	119	5	9			
	<hr/>			2,838	13	9
	<hr/>					
TOTAL ..				2,838	13	9

**STATEMENT No. 5.**

*Fund Account, in Account with A.S.B.*

**1934.**

the cataloguing and binding of Arabic and Persian Manuscripts, acquired and for the preparation of notices of Arabic and Persian various Libraries in India.

	Rs.	As.	P.
By Balance from last Account ..	....	3,445	0 6
Government Allowance for 1934-35	....	5,000	0 0
TOTAL ..		8,445	0 6

**STATEMENT No. 6.**

*Fund Account, in Account with A.S.B.*

1934.

General, I.M.S., for the foundation of a medal for the  
and Biological Science.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			554	6	0
Interest realized for the year ..	....			23	11	10
Appreciation, Investments revalued on 31-12-34 .. ..	....			107	10	0
<b>TOTAL ..</b>				<b>685</b>	<b>11</b>	<b>10</b>

**STATEMENT No. 7.**

*Account, in Account with A.S.B.*

1934.

with Rs. 500 odd from the Piddington Fund.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			2,312	5	7
Interest realized for the year ..	....			96	0	2
Appreciation, Investments revalued on 31-12-34 .. .. .	...			430	8	0
TOTAL ..				2,838	13	9

## STATEMENT No. 8.

1934.

*Annandale Memorial Fund*

From donations by subscription,

	Rs.	As.	P.	Rs.	As.	P.
To Cost of a Medal .. ..	....			172	10	0
Balance as per Balance Sheet—						
Rs. 3,000, 3½% G.P.N., 1842-43 } ..	3,885	0	0			
„ 1,000, „ „ 1854-55 } ..						
Surplus for the year .. ..	217	6	7			
	<hr/>			4,102	6	7
TOTAL ..				4,275	0	7

## STATEMENT No. 9.

1934.

*Permanent Library Endowment*

From gifts received,

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 11,000, 3½% G.P.N., 1854-55 /						
„ 1,000, „ „ 1854-55 \	12,626	4	0			
„ 1,000, „ „ 1854-55 \						
Surplus for the year .. ..	726	7	3			
	<hr/>			13,352	11	3
TOTAL ..				13,352	11	3

## STATEMENT No. 10.

1934.

*Sir William Jones Memorial*

From a sum gifted for the purpose in

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 1,500, 3½% G.P.N., 1854-55 } ..	2,913	12	0			
„ 1,500, „ „ 1900-01 } ..						
Surplus for the year .. ..	201	9	0			
	<hr/>			3,115	5	0
TOTAL ..				3,115	5	0

## STATEMENT No. 8.

*Account, in Account with A.S.B.*

1934.

started in 1926.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			3,520	10	1
Interest realized for the year ..	....			139	6	6
Appreciation, Investments revalued on 31-12-34 .. .. ..	....			615	0	0
<b>TOTAL</b> ..				<b>4,275</b>	<b>0</b>	<b>7</b>

## STATEMENT No. 9.

*Fund Account, in Account with A.S.B.*

1934.

started in 1926.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			10,906	11	9
Interest realized for the year ..	....			447	3	6
Appreciation, Investments revalued on 31-12-34 .. .. ..	....			1,998	12	0
<b>TOTAL</b> ..				<b>13,352</b>	<b>11</b>	<b>3</b>

## STATEMENT No. 10.

*Fund Account, in Account with A.S.B.*

1934.

1926, by Dr. U. N. Brahmachari.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			2,524	9	0
Interest realized for the year ..	104	8	0			
Donation .. .. ..	25	0	0			
				129	8	0
Appreciation, Investments revalued on 31-12-34 .. .. ..	....			461	4	0
<b>TOTAL</b> ..				<b>3,115</b>	<b>5</b>	<b>0</b>

## STATEMENT No. 11.

1934.

*Joy Gobind Law Memorial*

From a donation for the purpose in 1929,

---

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet -						
Rs. 3,000, 3½% G.P.N., 1854-55 ..	2,913	12	0			
Surplus for the year ..	160	3	0			
	-----	-----	-----	3,073	15	0
TOTAL ..				3,073	15	0

## STATEMENT No. 12.

1934.

*Building Fund*From a sum of Rs. 40,000 given by the Government of India  
proceeds of a portion

	Rs.	As.	P.
To Balance as per Balance Sheet ..	6,321	9	6
TOTAL ..	6,321	9	6

## STATEMENT, No. 13.

1934.

*Calcutta Science Congress Prize*


---

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet -						
Rs. 3,000, 3½% G.P.N., 1854-55 ..	2,913	12	0			
Surplus for the year ..	567	15	7			
	-----	-----	-----	3,481	11	7
TOTAL ..				3,481	11	7

## STATEMENT No. 11.

*Fund Account, in Account with A.S.B.*

1934.

by Dr. Satya Churn Law.

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	....			2,508	7	0
Interest realized for the year	..	....			104	4	0
Appreciation, Investments revalued on 31-12-34	.. ..	....			461	4	0
<b>TOTAL</b>	..				<b>3,073</b>	<b>15</b>	<b>0</b>

## STATEMENT No. 12.

*Account, in Account with A.S.B.*

1934.

towards the rebuilding of the Society's premises, and from the sale  
of the Society's land.

			Rs.	As.	P.
By Balance from last Account	..	..	6,321	9	6
<b>TOTAL</b>	..	..	<b>6,321</b>	<b>9</b>	<b>6</b>

## STATEMENT No. 13.

*Fund Account, in Account with A.S.B.*

1934.

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		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	....			2,916	3	7
Interest realized for the year	..	....			104	4	0
Appreciation, Investments revalued on 31-12-34	.. ..	....			461	4	0
<b>TOTAL</b>	..				<b>3,481</b>	<b>11</b>	<b>7</b>



**STATEMENT No. 14.****1934.*****Dr. Bruhl Memorial***

From a sum gifted for the purpose in 1929, by

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet						
Rs. 1,000, 3½% G.P.N., 1854-55 ..	971	4	0			
Less Deficit for the year ..	35	7	0			
	—	—	—	935	13	0
<b>TOTAL</b>	..			<b>935</b>	<b>13</b>	<b>0</b>

**STATEMENT No. 15.****1934.*****Building Repair***

			Rs.	As.	P.
To Balance as per Balance Sheet	..	..	6,000	0	0
<b>TOTAL</b>	..	..	<b>6,000</b>	<b>0</b>	<b>0</b>

**STATEMENT No. 16.****1934.*****International Catalogue of Scien-***

			Rs.	As.	P.
To Balance as per Balance Sheet	..	..	4,374	7	8
<b>TOTAL</b>	..	..	<b>4,374</b>	<b>7</b>	<b>8</b>

## STATEMENT No. 14.

*Fund Account, in Account with A.S.B.*

1934.

the Brühl Farewell Committee.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			747	5	0
Interest realized for the year ..	....			34	12	0
Appreciation, Investments revalued on 31-12-34 .. ..	....			153	12	0
<b>TOTAL</b> ..				935	13	0

## STATEMENT No. 15.

*Fund Account, in Account with A.S.B.*

1934.

	Rs.	As.	P.
By Balance from last Account ..	4,000	0	0
Transfer from the A.S.B. General Fund ..	2,000	0	0
<b>TOTAL</b> ..	6,000	0	0

## STATEMENT No. 16.

*tific Literature, in Account with A.S.B.,*

1934.

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	Rs.	As.	P.
By Balance from last Account ..	4,374	7	8
<b>TOTAL</b> ..	4,374	7	8

## STATEMENT No. 17.

1934.

*Provident Fund Ac-*

From contributions by the

	Rs.	As.	P.	Rs.	As.	P.
To Cost of a Receipt Stamp ..	.	..		0	1	0
Balance as per Balance Sheet—						
Rs. 5,000, 3% G.P.N., 1941 ..	5,059	6	0			
„ 6,000, 5-year Postal Cash Cer- tificates . . . . .	5,100	0	0			
Surplus for the year ..	3,897	13	10			
				14,057	3	10
TOTAL ..				14,057	4	10

## STATEMENT No. 18.

1934.

*Advances*

	Rs.	As.	P.
To Balance from last Account . . . . .	1,026	0	0
Advances . . . . .	1,346	3	0
TOTAL . . . . .	2,372	3	0

**STATEMENT No. 17.***count, in Account with A.S.B.***1934.**

Society and its Staff.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			12,217	10	8
Staff Contribution for the year ..	682	5	0			
Society's Contribution for the year ..	682	5	0			
Interest on Investments, etc. ..	140	11	3			
	<hr/>			1,505	5	3
Interest realized from Savings Bank, for 1934 .. ..	....			181	2	11
Appreciation, Investments revalued on 31-12-34 .. ..	....			153	2	0
<b>TOTAL</b> ..				14,057	4	10

**STATEMENT No. 18.***Account, in Account with A.S.B.***1934.**

	Rs.	As.	P.
By Advances Returned .. ..	767	3	0
Balance as per Balance Sheet ..	1,605	0	0
<b>TOTAL</b> ..	2,372	3	0

## STATEMENT No. 19.

1934.

*Personal*

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Account ..	....			4,738	6	9
Advances .. ..	....			4,779	4	9
Asiatic Society's Subscriptions, etc... ..	12,595	1	0			
Subscriptions to Journal and Pro- ceedings and from Book Sales, etc., from Publication Fund ..	4,230	2	3			
				16,825	3	3

TOTAL .. 26,342 14 9

## STATEMENT No. 20.

1934.

*Publication Fund*

From sale proceeds

	Rs.	As.	P.	Rs.	As.	P.
To Books returned, etc. ..	....			48	3	0
Publications of the A.S.B. ..	....			4,230	2	3
Balance as per Balance Sheet ..	....			7,197	15	9

TOTAL .. 11,476 5 0

## STATEMENT No. 19.

*Account.*

1934.

		Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts during the year	..	....			20,476	6	6
Bad Debts written off, A.S.B.	..	847	4	0			
Books returned, etc.	..	48	3	0			
					895	7	0
Balance	.. ..	....			4,971	1	3

Outstandings.	Amount due to Society.			Amount due by Society.		
	Rs.	As.	P.	Rs.	As.	P.
Members	3,755	0	0	455	13	0
Subscribers	24	0	0	48	0	0
Bill Collector's Deposit				330	0	0
Miscellaneous	2,542	12	3	516	14	0
	6,321	12	3	1,350	11	0

TOTAL .. 26,342 14 9

## STATEMENT No. 20.

*Account, in Account with A.S.B.*

1934.

of publications.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	....		6,882	1	0
Cash Sales of Publications	..	....		364	1	9
Credit Sales of Publications, etc.	..	3,390	2 3			
Subscriptions to Journal and Proceedings, etc.	.. ..	840	0 0			
				4,230	2	3
TOTAL	..			11,476	5	0

## STATEMENT No. 21.

1934.

## (1) Investment Account

	Rs. As. P.	Rs. As. P.
To Balance from last Account ..	....	1,185 6 8
Deposits of Contributions during the year .. ..	1,364 10 0	
Deposits of Advances returned ..	706 3 0	
Deposits of accrued Interest ..	140 11 3	
	<hr/>	2,271 8 3
Interest realized for the year 1934 ..	....	181 2 11
TOTAL ..		3,638 1 10

## STATEMENT No. 22.

1934.

## (2) Investment Account

			Rs. As. P.
To Balance from last Account ..	..	..	29,649 13 6
Fixed Deposits ..	..	..	20,315 8 9
TOTAL ..	..		49,965 6 3

## STATEMENT No. 21.

(Savings Bank Deposit, Imperial Bank of India).

1934.

	Rs.	As.	P.	Rs.	As.	P.
By Withdrawal of Deposits for Staff Advances, etc. ..	1,346	3	0			
Cost of a Receipt Stamp ..	0	1	0			
	-	—	—	1,346	4	0
Balance as per Balance Sheet ..	....			2,291	13	10
<b>TOTAL</b> ..				3,638	1	10

## STATEMENT No. 22.

(Fixed Deposit with Central Bank of India).

1934

			Rs.	As.	P.
By Withdrawal of Deposits ..	..	..	19,965	6	3
Balance as per Balance Sheet ..	..	..	30,000	0	0
<b>TOTAL</b> ..			49,965	6	3



## STATEMENT No. 23.

1934.

## (3) Investment

		Rs.	As.	P.
To Balance from last Account ..	..	2,69,391	8	0
Appreciation, Investments revalued on 31-12-34 ..	..	48,007	12	0
<b>TOTAL</b>	<b>..</b>	<b>3,17,399</b>	<b>4</b>	<b>0</b>

Face Value Rs.	FUNDS.	Rate in Rs %	31st December, 1934, Valuation.	31st December, 1933, Valuation.	Appreciation on 31st December, 1934.		
			Rs. A P.	Rs. A P.	Rs. A P.		
ASIATIC SOCIETY OF BENGAL.							
PERMANENT RESERVE.							
16,700	3½% G. Loan No 155119, 1842-43	97 2/-	2,43,738 2 0	2,05,136 4 0	38,601 14 0		
1,00,000	3½% G. Loan No. 216811, 1854-55	97 2/-					
53,700	3½% G. Loan No. 216812, 1854-55	97 2/-					
5,000	3½% G. Loan No 023544, 1879	97 2/-					
1,000	3½% G. Loan No 023548, 1879	97 2/-					
44,300	3½% G. Loan No 337428, 1885	97 2/-					
25,000	3½% G. Loan No. 298309, 1900-01	97 2/-	31,478 10 0	29,315 4 0	4,563 6 0		
4,800	3½% G. Loan Part of No 298816, 1900-01	97 2/-					
500	3½% G. Loan No. 003715, 1896-97	97 2/-					
TEMPORARY RESERVE							
21,200	3½% G. Loan Part of No. 298816, 1900-01	97 2/-	20,500 8 0	17,331 0 0			
11,400	4½% G. Loan of 1955-60	110 9/-	13,288 2 0	11,944 4 0			
PENSION FUND							
2,000	3½% G. Loan No. 029546, 1879	97 2/-	2,719 8 0	2,289 0 0	430 8 0		
500	3½% G. Loan No. 241076, 1854-55	97 2/-					
800	3½% G. Loan No. 24702-74, 1854-55	97 2/-					
BARCLAY MEMORIAL FUND.							
300	3½% G. Loan No 170671, 1854-55	97 2/-	679 14 0	572 4 0	107 10 0		
100	3½% G. Loan No. 220763, 1854-55	97 2/-					
100	3½% G. Loan No. 304077, 1900-01	97 2/-					
110	3½% G. Loan No. 354795, 1925	97 2/-					
100	3½% G. Loan No. 248773, 1854-55	97 2/-					
SIR WILLIAM JONES MEMORIAL FUND ACCOUNT.							
1,500	3½% G. Loan No. 184719, 1854-55	97 2/-	2,913 12 0	2,452 8 0	461 4 0		
1,500	3½% G. Loan Nos. 256907, 292707, 1900-01	97 2/-					
ANNANDALE MEMORIAL FUND.							
3,000	3½% G. Loan Nos. 195902, 195903, 195907, 1842-43	97 2/-	3,985 0 0	3,270 0 0	615 0 0		
1,000	3½% G. Loan No. 222872, 1854-55	97 2/-					
PERMANENT LIBRARY ENDOWMENT FUND.							
5,000	3½% G. Loan No 240065, 1854-55	97 2/-	12,628 4 0	10,027 8 0	1,884 12 0		
2,000	3½% G. Loan Nos. 231119, 290787, 1854-55	97 2/-					
1,000	3½% G. Loan No 231688, 1854-55	97 2/-					
8,000	3½% G. Loan No. 233358-55, 1854-55	97 2/-					
2,000	3½% G. Loan No 222874, 1854-55	97 2/-					
1,000	3½% G. Loan No. 242270, 1854-55	97 2/-					
CALCUTTA SCIENCE CONGRESS PRIZE FUND.							
3,000	3½% G. Loan No. 235851, 1854-55	97 2/-	2,918 12 0	2,452 8 0	461 4 0		
DR BRÜHL MEMORIAL FUND.							
1,000	3½% G. Loan No 235813, 1854-55	97 2/-	971 4 0	817 8 0	153 12 0		
JOY GOBIND LAW MEMORIAL FUND							
1,000	3½% G. Loan No. 213594, 1854-55	97 2/-	2,918 12 0	2,452 8 0	461 4 0		
1,000	3½% G. Loan No. 218595, 1854-55	97 2/-					
500	3½% G. Loan No. 218596, 1854-55	97 2/-					
500	3½% G. Loan No. 218678, 1854-55	97 2/-					

## STATEMENT No. 23.

## Account

1934.

			Rs.	As.	P.
By Balance as per Balance Sheet	..	..	3,17,399	4	0
TOTAL	..	..	3,17,399	4	0

Face Value Rs.	FUNDS	Rate or Rs. %	31st December 1934 Valua- tion	31st December, 1933 Valua- tion	Apprecia- tion on 31st December, 1934
			Rs.	A. P.	Rs.
3,14,100	Brought forward	..	3,07,239	14 0	2,59,385 4 0
	PROVIDENT FUND ACCOUNT.				
*5,000 3% G. Loan of 1941	..	101 3 -	5,059	6 0	5,056 4 0
6,000 Post Office 5-year Cash Certificates	..	85 -	5,100	0 0	4,950 0 0
			10,159	6 0	10,006 4 0
3,25,100			3,17,399	4 0	2,69,391 8 0
					48,007 12 0

During the year 4% G. Loan of 1934, was converted to 3% G. Loan of 1941

## STATEMENT No. 24.

1934.

*Cash*

For the year to 31st

To	Rs.	As.	P.	Rs.	As.	P.
Balance from last Account ..			....	9,531	13	2
General Fund .. ..	33,318	2	3			
Oriental Publication Fund No. 1 Account	6,600	0	0			
Oriental Publication Fund No. 2 Account	2,400	0	0			
Sanskrit Manuscripts Fund Account ..	5,440	0	0			
Arabic and Persian Manuscripts Fund Account .. ..	5,000	0	0			
Barclay Memorial Fund Account ..	23	11	10			
Servants' Pension Fund Account ..	96	0	2			
Annandale Memorial Fund Account ..	139	6	6			
Permanent Library Endowment Fund Account .. ..	447	3	6			
Sir Wilham Jones Memorial Fund Account	129	8	0			
Joy Gobind Law Memorial Fund Account	104	4	0			
Calcutta Science Congress Prize Fund Account .. ..	104	4	0			
Dr. Brühl Memorial Fund Account ..	34	12	0			
Provident Fund Account .. ..	1,505	5	3			
Advances Account .. ..	767	3	0			
Personal Account .. ..	20,476	6	6			
Publication Fund Account .. ..	364	1	9			
Savings Bank Deposit Account, Imperial Bank of India, Calcutta .. ..	1,346	3	0			
Fixed Deposit Account, Central Bank of India, Calcutta .. ..	19,965	6	3			
				98,261	14	0
TOTAL ..				1,07,793	11	2

## STATEMENT No. 24.

*Account.*

1934.

December, 1934.

By	Rs.	As.	P.	Rs.	As.	P.
General Fund .. .. .	65,105	1	5			
Oriental Publication Fund No. 1 Account	172	0	0			
Oriental Publication Fund No. 2 Account	600	0	0			
Sanskrit Manuscripts Fund Account ..	805	13	0			
Arabic and Persian Manuscripts Fund Account .. .. .	1,408	7	6			
Barelay Memorial Fund Account ..	27	10	0			
Annandale Memorial Fund Account ..	172	10	0			
Advances Account .. .. .	1,346	3	0			
Personal Account .. .. .	4,779	4	9			
Savings Bank Deposit Account, Imperial Bank of India, Calcutta .. .. .	2,271	8	3			
Fixed Deposit Account, Central Bank of India, Calcutta .. .. .	20,315	8	9			
				97,004	2	8
Balance carried forward .. .. .	....			10,789	8	6

TOTAL .. 1,07,793 11 2

## STATEMENT No. 25.

1934.

*Balance**As at 31st*

## LIABILITIES.

	Rs.	As.	P.	Rs.	As.	P.
General Fund .. .. .	2,76,691	3	0			
Oriental Publication Fund No. 1 Account	125	1	11			
Sanskrit Manuscripts Fund Account ..	16,694	1	3			
Arabic and Persian Manuscripts Fund Account .. .. .	4,536	9	0			
Barclay Memorial Fund Account ..	658	1	10			
Servants' Pension Fund Account ..	2,838	13	9			
Annandale Memorial Fund Account ..	4,102	6	7			
Permanent Library Endowment Fund Account .. .. .	13,352	11	3			
Sir William Jones Memorial Fund Account	3,115	5	0			
Joy Gobind Law Memorial Fund Account	3,073	15	0			
Building Fund Account .. .. .	6,321	9	6			
Calcutta Science Congress Prize Fund Account .. .. .	3,481	11	7			
Dr. Brühl Memorial Fund Account ..	935	13	0			
Building Repair Fund Account ..	6,000	0	0			
International Catalogue of Scientific Literature Account .. .. .	4,374	7	8			
Provident Fund Account .. .. .	14,057	3	10			
Publication Fund Account .. .. .	7,197	15	9			
				3,67,557	1	11
TOTAL .. .. .				3,67,557	1	11

We have examined the above Balance Sheet and the appended detailed accounts with the Books and Vouchers presented to us and certify that they are in accordance therewith, and set forth correctly the position of the Society as at 31st December, 1934

PRICE, WATERHOUSE, PEAT & CO.,

Calcutta,  
31st January, 1935

Auditors.  
Chartered Accountants,  
Registered Accountants.

## STATEMENT No. 25.

Sheet.

1934.

December, 1934.

## ASSETS.

	Rs.	As.	P.	Rs.	As.	P.
Oriental Publication Fund No. 2 Account	500	6	4			
Advances Account .. .. .	1,605	0	0			
Personal Account .. .. .	4,971	1	3			
				7,076	7	7
Investment Account .. .. .	3,17,399	4	0			
Savings Bank Deposit Account, Imperial Bank of India .. .. .	2,291	13	10			
Fixed Deposit Account, Central Bank of India, Ltd. .. .. .	30,000	0	0			
				3,49,691	1	10
Cash Balances :—						
With the Imperial Bank of India, Park Street Branch, on current Account .. .. .	10,621	10	6			
In hand .. .. .	167	14	0			
				10,789	8	6
TOTAL .. .. .				3,67,557	1	11

S. L. HORA,  
Honorary Treasurer.

## [APPENDIX IV]

### Jubilee Celebration Account of the Asiatic Society of Bengal, 1933-1934.

		Rs.	As.	P.			Rs.	As.	P.
To Donations	..	3,623	0	0	By Cost of Banquet		1,600	0	0
Subscriptions to Banquet	..	1,005	0	0	Do. Conversa- zions	..	1,121	11	0
Miscellaneous	..	87	0	0	Miscellaneous	..	872	8	6
					Balance	..	1,120	12	6
TOTAL	..	4,715	0	0	TOTAL	..	4,715	0	0

S. L. HORA,  
*Honorary Treasurer,*  
*Asiatic Society of Bengal.*

## [APPENDIX V.]

### Abstract Proceedings Council, 1934.

(Rule 48 f.)

#### ANNUAL MEETING—

Annual Report for 1933. Approved. 29-1-34.  
No. 12.

#### BUILDING —

Report outbreak of fire in the Society's building. Record. 24-9-34.  
No. 2.

The question of repairs to the Society's building. Accept recommendations of the Finance Committee.

No. 3. 29-10-34.

Finance Committee No. 4 of 29-10-34. Repairs to the Building. Recommendation: For electric wiring ask for a report and estimates from Messrs. Balmer Lawrie & Co., and for general repairs ask for a report and estimates from Messrs. Martin & Co.

Repairs to the wiring may be undertaken at once after comparison of estimates of Messrs. General Electric Co. with those of Messrs. Balmer Lawrie & Co. Accepted by Council.

No. 6. 29-10-34

#### COMMITTEES—

Appointment of Committees of Council for the year.—

##### (a) *Finance Committee :*

President	}	<i>Ex-officio.</i>
Treasurer		
General Secretary		
Dr. A. M. Heron.		
Dr. J. N. Mukherjee		

##### (b) *Library Committee :*

President	}	<i>Ex-officio.</i>
Treasurer		
General Secretary		
Philological Secretary		
Jt. Philological Secretary		
Biological Secretary		
Physical Science Secretary		
Anthropological Secretary		
Medical Secretary		
Library Secretary		

##### (c) *Publication Committee :*

President	}	<i>Ex-officio.</i>
Treasurer		
General Secretary		
Philological Secretary		
Jt. Philological Secretary		



Biological Secretary	} <i>Ex-officio.</i>
Physical Science Secretary	
Anthropological Secretary	
Medical Secretary	
Library Secretary	

(d) *Re-Organization Committee :*

President	} <i>Ex-officio.</i>
Treasurer	
General Secretary	
Dr. U. N. Brahmachari.	
Dr. A. M. Heron.	
Dr. J. N. Mukherjee.	
Dr. Bainsi Prasad.	

Terms of reference: To investigate the financial position of the Society and to make such recommendations to Council as may seem appropriate as a result. To report to March Council.

No. 1. (Special Council.)

13-2-34.

Appointment of Sub Committees of the Re-Organization Committee.

On a proposal by Dr. Fermor: Resolved that the following Sub-Committees be constituted under the points of reference indicated against each of them:—

(a) *Library Sub-Committee :*

Dr. A. M. Heron (Chairman).  
 Dr. J. N. Mukherjee.  
 Mr. Johan van Manen.

(b) *Publication Sub-Committee :*

Dr. Bainsi Prashad (Chairman).  
 Dr. S. L. Hora.  
 Mr. Johan van Manen.

To report on the Society's publications in the first instance the Journal and Memoirs, if expedient by an interim report.

(c) *Finance and General Sub-Committee :*

Dr. U. N. Brahmachari (Chairman).  
 Dr. A. M. Heron.  
 Dr. S. L. Hora.  
 Mr. Johan van Manen.

To report on the financial position of the Society in its various aspects, as well as on any other subjects not included in the scope of the enquiries of the two other Sub-Committees, but including questions of staff.

On a proposal by Dr. Brahmachari: Resolved that Mr. Johan van Manen do act as Secretary of the Committee and Sub-Committees.

Further resolved: That the Members of the Committee be invited to forward topics for discussion and suggestions to the General Secretary for circulation to the other Members prior to any meeting of the various Sub-Committees, and also that the minutes of any Sub-Committee be circulated for information to all the members of the Committee.

Re-Organization Committee.

15-2-34.

## CONDOLENCES—

Letter of condolence to the relatives of the late Sir C. C. Ghose and reply thereto. Record.

No. 1.

24-9-34.

## CONGRATULATIONS AND THANKS—

Recommendation Finance Committee No. 3 of 26-1-34. Report of the Honorary Treasurer regarding question of Income Tax of the Society's staff and of General Secretary. Resolved to refer to Council.

Also resolved to express the committee's great appreciation of Mr. K. C. Mahindra, the retiring Honorary Treasurer, for the exceedingly valuable work performed by him for the Society in his capacity as Treasurer together with a recommendation to the Council to endorse this appreciation. Accepted by Council.

No. 8.

29-1-34.

Council's thanks. The Council's thanks to be conveyed to the members of the Anniversary Celebration Committees.

No. 15.

29-1-34.

Presentation by Sir David Ezra of a copy of the Descriptive Catalogue of Hebrew and Samaritan Manuscripts in the Sassoon Library, London. Cordial thanks to the donor.

No. 2.

26-2-34.

Presentation to the Society by M. J. Delacour of a copy of his work on the 'Birds of French Indo-China'. The Council's thanks to be conveyed to the donor.

No. 2.

30-4-34.

Report receipt of news of the election of Dr. L. L. Fermor and Lt.-Col. R. B. S. Sewell to Fellowship of the Royal Society. The heartiest congratulations of the Council to be conveyed to the recipients.

No. 3.

30-4-34.

The Chairman expressed on behalf of the Council their hearty congratulations to Sir Upendra Nath Brahmachari on the occasion of the conferment upon him by His Majesty of the honour of Knighthood.

On a proposal of Dr. Bani Prashad it was resolved to arrange for a function in honour of Sir Upendra Nath in the Rooms of the Society, limited to Members, and to suit the convenience of the guest of honour.

No. 2.

30-7-34.

Donation from Sir U. N. Brahmachari to meet the deficit for the year in 'Sir William Jones Memorial Medal Fund'. Record with thanks to the donor.

No. 2.

27-8-34.

Publication Committee No. 2 of 26-11-34. Report by Dr. S. L. Hora concerning progress made with the publication of the Journal. Recommendation: Noted with thanks. Accepted by Council.

No. 6.

26-11-34.

Letter from the Honorary Treasurer regarding re-appropriation statement. Approved. The Council's thanks to be conveyed to Dr. Hora.

No. 3.

17-12-34.

Budget estimate for 1935 (Recommendations of the Special Finance Committee of 14-12-34). Adopt. The Council's thanks to be conveyed to Dr. Hora for the services rendered by him as Treasurer and for his careful preparation of the budget estimates.

No. 7.

17-12-34.

**COUNCIL—**

Finance Committee No. 4 of 27-4-34. Absence Honorary Treasurer from Calcutta during next month. Recommendation: General Secretary to officiate. Usual resolution to be passed. Accepted by Council.

No. 10.

30-4-34.

Special Council Meeting. A special Council Meeting to be held on Tuesday, the 13th February, 1934, to appoint the Committees of Council and Re-Organization Committee.

No. 14.

29-1-34.

Signatures signifying acceptance of election to Council by the Council Members. Record.

No. 1.

26-2-34.

Letter from Sir C. C. Ghose resigning his seat on the Council. Accept with regrets. Invite Sir B. L. Mitter to fill the vacancy.

No. 5.

30-4-34.

Absence of Honorary Treasurer from Calcutta. Resolved that the General Secretary (Mr. Johan van Manen) be authorized to officiate as Honorary Treasurer to the Society during the absence of the Honorary Treasurer (Dr. S. L. Hora) from Friday, the 25th May, 1934, until notification of the latter's return to Calcutta and resumption of office.

No. 16.

30-4-34.

Report acceptance seat on Council by the Hon'ble Sir B. L. Mitter. Record.

No. 7.

25-6-34.

The Chairman welcomed back to the Council the Hon'ble Sir B. L. Mitter and expressed on behalf of the Members their great pleasure and satisfaction at seeing him back in their midst after his long absence from Calcutta on important state service.

No. 1.

30-7-34.

General Meetings and Council Meetings during recess months, September and October. General Meetings and Council Meetings to be held as usual during the recess months.

No. 10.

27-8-34.

Fixing of dates for the December Committees and Council Meetings. Committees and Council on the 17th December; Finance Committee on the 14th December.

No. 2.

26-11-34.

Informal consideration composition of Council, 1935-36. After discussion, the following list of candidates for nomination to next year's Council was placed before the meeting for consideration :—

President	..	..	Dr. L. L. Fermor.
Vice-President	..	..	Sir David Ezra.
"	"	..	Sir U. N. Brahmachari.
"	"	..	Lt.-Col. R. Knowles.

Vice-President ..	..	The Hon'ble Sir B. L. Mitter.
General Secretary ..	..	Mr. Johan van Manen.
Treasurer ..	..	Dr. S. L. Hora.
Phil. Secretary ..	..	Dr. S. K. Chatterji.
Jt. Phil. Secretary ..	..	Dr. M. Hidayat Hosain.
Nat. Hist. Secretary (Biology)		Dr. Bains Prashad.
" " " (Phy. Sci.)		Dr. J. N. Mukherjee.
Anthropological Secretary ..	..	Rai Bahadur R. Chanda.
Medical Secretary ..	..	Lt.-Col. R. N. Chopra.
Library Secretary ..	..	Dr. A. M. Heron.
Member of Council ..	..	Mr. L. R. Fawcus.
" " ..	..	Mr. Percy Brown.
" " ..	..	The Hon'ble Mr. Justice J. Lort-Williams.
" " ..	..	Mr. C. C. Calder.
" " ..	..	Mr. N. G. Majumdar.

Resolved: That the General Secretary do print and circulate to the Members of the Council the list of the Council as at present constituted, together with the new list placed before the meeting, and provided with a blank column for additional names; and these lists be returned to the General Secretary within a week of date of issue; that a list be compiled of the candidates finally proposed and be placed before the next Council Meeting to be voted upon.

No. 8.

26-11-34.

Council nomination, 1935-36. The General Secretary reported that 16 Council Members had returned the list of candidates circulated duly signed and unanimously approved with one single additional suggestion.

Resolved: That the list of names placed before the Council in the November meeting be declared that of the Council's candidates for election to next year's Council and that it be ordered to be issued to the Resident Members as prescribed by Rule 44.

No. 12.

17-12-34.

#### EXCHANGE OF PUBLICATIONS—

Library Re-organization Sub-Committee No. 5 of 6-3-34. Recommended that the exchange list, especially with regard to Orientalistic Journals be extended. Council order: Postpone.

No. 13.

30-4-34.

#### FELLOWS—

Recommendations of the meeting of Resident Fellows. Accepted. Put up for election in the Annual Meeting: Mr. D. N. Wadia.

No. 7.

29-1-34.

#### FINANCE—

Recommendation Finance Committee No. 3 of 26-1-34. Report of the Honorary Treasurer regarding question of Income Tax of the Society's staff and of General Secretary. Resolved to refer to Council.

Resolved to express the Committee's great appreciation of Mr. K. C. Mahindra, the retiring Honorary Treasurer, for the exceedingly valuable work performed by him for the Society in his capacity as Treasurer together with a recommendation to the Council to endorse this appreciation. Accepted by Council.

No. 8.

29-1-34.

Finance Committee No. 2 of 23-2-34. Further report of the Honorary Treasurer regarding the question of Income Tax of the Society's Staff and of General Secretary, and the late Honorary Treasurer's notes. Recommendation: Pay amount Rs. 582-8-0 as further demanded by Income Tax Officer. Accept Mr. Mahindra's recommendations 1 and 2. Circulate papers to members of Finance Committee for further consideration of recommendations 3 and 4. Council order: Accept. Further resolved that the General Secretary's car allowance be fixed at Rs. 120 per mensem.

No. 6.

26-2-34.

Letter from the Government of Bengal, Department of Education, sanctioning the annual grant for the publication of the Sanskrit Manuscripts Catalogue. Statement to be supplied to the Government as demanded. The Council's thanks to be conveyed to the Education Secretary. Any doubtful description of the grant to be remedied.

No. 4.

30-4-34.

Finance Committee No. 3 (b) of 27-4-34. Auditors' suggestion to make changes in the mode of presentation of the Annual Statement of Accounts for the year 1933. Recommendation: The General Secretary to write to the Auditors to clarify the position, with an expression of willingness to consider suggestion for a change in the preparation of the accounts. Accepted by Council.

No. 10.

30-4-34.

Absence of Honorary Treasurer from Calcutta. Resolved that the General Secretary (Mr. Johan van Manen) be authorized to officiate as Honorary Treasurer to the Society during the absence of the Honorary Treasurer (Dr. S. L. Hora) from Friday, the 25th May, 1934, until notification of the latter's return to Calcutta and resumption of office.

No. 16.

30-4-34.

Recommendation Finance Committee No. 3 (a) of 23-5-34. Further report on the question of arrears of Income Tax paid by the Society for the Staff. Recommended: (i) That the arrangements be approved for the recovery of the money advanced by the Society in paying Income Tax on staff salaries for the 9 months of the current year. (1933-34); (ii) that the proposal be approved that the Society should bear one-half of the amount paid as the Income Tax on staff salaries for the two years preceding the current year; (iii) that the other half of the amount be recovered from the members of staff before the 31st December, 1934; (iv) that the arrangements be approved as suggested by the General Secretary whereby he will refund Income Tax paid by the Society on his behalf at the rate of Rs. 100 monthly from 31st May, 1934, and that the General Secretary should further attempt to regularize his position of not being a member of the Society's staff with the Income Tax Officer, after which the Finance Committee will consider the matter anew. Accepted by Council.

No. 2.

28-5-34.

Recommendation Finance Committee No. 3 of 25-7-34. Report by the Honorary Treasurer of a fixed deposit for Rs. 10,000, made during the month with the Central Bank of India, Ltd., Calcutta, for a period of three months. Approve. Accepted by Council.

No. 6.

30-7-34.

Recommendation Finance Committee No. 4 of 25-7-34. Advance subscription to World List of Scientific Periodicals. Remit reduced

advance subscription before the end of the month in anticipation of sanction. Accepted by Council.

No. 6.

30-7-34.

Recommendation Finance Committee No. 5 of 25-7-34. Statement by the Honorary Treasurer regarding income and expenditure during the first six months of the current year. Record. Accepted by Council.

No. 6.

30-7-34.

Proposal continuation of the Catalogue of Arabic Manuscripts. Accept proposal that Dr. Hidayat Hosain be placed in charge at a remuneration of Rs. 200 per mensem.

No. 3.

27-8-34.

Recommendation Finance Committee No. 3 of 19-9-34. Report by the Honorary Treasurer of the conversion of 4½% Bonds 1934 for Rs. 5,000 (a/c Provident Fund) to the new 3% Bonds 1941. Approve. Approved by Council.

No. 5.

24-9-34.

Finance Committee No. 3 (a) of 23-11-34. Statement of receipts and expenditure of the Society for the ten months ending with the 31st October, 1934. Recommendation: Record. Place before the Council and draw attention to expenditure on new 'Advance Proceedings' and to headings under which savings have been effected or excess expenditure have been incurred. Recommended that the unexpended portion of the special grant for bringing up the Journal up to date be carried over as an extra grant in next year's budget. Council order: Accept.

Also resolved that when under any head any sum is spent in excess of the budgetary provision an attempt should be made to meet the excess by re-appropriation under sanction of the Council, and if that be not possible, by supplementary budget provision. That the Treasurer be authorized to exceed payment above budget allowance up to Rs. 100 in anticipation of sanction by Council. That the unexpended portion of the grant for publication be carried over to next year's budget.

No. 4.

26-11-34.

Finance Committee No. 3 (b) of 23-11-34. Authority to make payment before the end of the year of all bills. Recommendation: Recommended that the usual authority be given.

Council order: Accept. Also resolved that the Treasurer be authorized to exceed payment above budget allowance up to Rs. 100 in anticipation of sanction by Council.

No. 4.

26-11-34.

Letter from the Honorary Treasurer regarding re-appropriation statement. Approved. The Council's thanks to be conveyed to Dr. Hora.

No. 3.

17-12-34.

Report sanction of grant towards the publication of the Descriptive Catalogue of Sanskrit Manuscripts. Record.

No. 4.

17-12-34.

Finance Committee No. 2 of 14-12-34. Surplus under heading Jubilee Celebrations. Recommendation: That any surplus left over under the heading Anniversary Jubilee Celebrations be funded for

future expenditure connected with its specific purpose. Accepted by Council.

No. 6.

17-12-34.

Recommendation Finance Committee No. 2 (a) of 14-12-34. Collecting Sarkar's security deposit with the Society. No change. Accepted by Council.

No. 6.

17-12-34.

Recommendation Finance Committee No. 2 (b) of 14-12-34. Fixed Deposit made during the month with the Central Bank of India, Ltd., Calcutta, of Rs. 10,000 for a period of one year. Record. Accepted by Council.

No. 6.

17-12-34.

Finance Committee No. 2 (f) of 14-12-34. Bad Debts written off during the year—Rs. 892-13-0. Recommendation. Write off.

No. 6.

17-12-34.

Finance Committee No. 2 (h) of 14-12-34. Budget estimates for 1935. Recommendation: Adopt Special Committee's recommendations. Council Order: Accept with the exception of those regarding the budget estimates for next year to be discussed separately.

No. 6.

17-12-34.

Special Finance Committee No. 1 of 14-12-34. Consideration Budget estimates for 1935. The Budget estimates for 1935 were scrutinized and adopted as amended. Recommendation: That the revised estimates be adopted by Council. Council Order: Adopt. The Council's thanks to be conveyed to Dr. Hora for the services rendered by him as Treasurer and for his careful preparation of the Budget estimates.

No. 7.

17-12-34.

#### FURNITURE—

Finance Committee No. 3 of 24-8-34. Report order book cases for Works of Reference. Recommendation: Approve. Accepted by Council.

No. 6.

27-8-34.

#### GRANTS —

Letter from the Government of Bengal, Department of Education, sanctioning the annual grant for the publication of the Sanskrit Manuscript Catalogue. Statement to be supplied to the Government as demanded. The Council's thanks to be conveyed to the Education Secretary. Any doubtful description of the grant to be remedied.

No. 4.

30-4-34.

#### INCOME TAX—

Recommendation Finance Committee No. 3 of 26-1-34. Report of the Honorary Treasurer regarding question of Income Tax of the Society's staff and of General Secretary. Resolved to refer to Council.

Resolved to express the Committee's great appreciation of Mr. K. C. Mahindra, the retiring Honorary Treasurer, for the exceedingly valuable work performed by him for the Society in his capacity as Treasurer together with a recommendation to the Council to endorse this appreciation. Accepted by Council.

No. 8.

29-1-34.

Recommendations of the Finance Committee of 23-2-34. Accept. Further resolved that the General Secretary's car allowance be fixed at Rs. 120 per mensem.

No. 6.

26-2-34.

Finance Committee No. 2 of 23-2-34. Further report of the Honorary Treasurer regarding the question of Income Tax of the Society's Staff and of General Secretary, and the late Honorary Treasurer's notes. Recommendation: Pay amount Rs. 582-8-0 as further demanded by Income Tax Officer. Accept Mr. Mahindra's recommendations 1 and 2. Circulate papers to members of Finance Committee for further consideration of recommendations 3 and 4. Council order: Accept. Further resolved that the General Secretary's car allowance be fixed at Rs. 120 per mensem.

No. 6.

26-2-34.

Recommendation Finance Committee No. 3 (a) of 23-5-34. Further report on the question of arrears of Income Tax paid by the Society for the Staff. Recommended: (i) That the arrangements be approved for the recovery of the money advanced by the Society in paying income tax on staff salaries for the 9 months of the current year (1933-34); (ii) That the proposal be approved that the Society should bear one-half of the amount paid as the income tax on staff salaries for the two years preceding the current year; (iii) That the other half of the amount be recovered from the members of staff before the 31st December, 1934; (iv) That the arrangements be approved as suggested by the General Secretary whereby he will refund income tax paid by the Society on his behalf at the rate of Rs. 100 monthly from 31st May, 1934, and that the General Secretary should further attempt to regularize his position of not being a member of the Society's staff with the Income Tax Officer, after which the Finance Committee will consider the matter anew. Accepted by Council.

No. 2.

28-5-34.

#### INDIAN SCIENCE CONGRESS -

Letter of thanks from the Indian Science Congress Association. Record.

No. 2.

29-1-34.

Framing of Regulations for the award of 'The Indian Science Congress Calcutta Medal'. Accept Regulations as proposed with Dr. Fermor's emendation.

(1) The Medal shall be awarded at the Ordinary Annual Meeting of the Asiatic Society of Bengal, in February, in such years as the session of the Congress is held in Calcutta.

(2) The Medal shall be bestowed on a person who, in the opinion of the Council, has rendered conspicuously important services to the Indian Science Congress, or on a Member of the Indian Science Congress who, in the opinion of the Council, has made conspicuously important contributions to science.

(3) The Council shall, at a meeting preceding the Ordinary Monthly Meeting in November, appoint an Advisory Board consisting of not less than Five members.

(4) The Advisory Board shall be termed 'The Indian Science Congress Calcutta Medal Advisory Board'. This Board shall include the Biology, Physical Science, Anthropology, Medical and General Secretaries. The Board shall appoint a Chairman from amongst its members who shall have a casting vote (in addition to his own vote) in the event of the number of votes being equally divided.

(5) The General Secretary shall call a meeting of the Advisory Board on the first convenient date subsequent to the first Monday of December,



at the same time requesting members to bring with them to the meeting detailed statements of the work or attainments of such candidates as they may wish to propose. The General Secretary shall also place before the Board for consideration detailed statements of the work or attainments of any other candidate submitted by any Fellow of the Society. The Board shall make such arrangements as may be necessary for the selection of a name to be submitted to the Council at its December meeting.

(6) Notwithstanding anything determined in these Regulations, it shall be within the competence of the Board to abstain from the selection of any name to be submitted for the year and to report accordingly to the Council, in which case, provided the Council concurs, the award for the year shall lapse.

No. 1.

29-10-34.

Appointment of Advisory Board for the award of Indian Science Congress Calcutta Medal. The Board to consist of the five officials mentioned in the Rules.

No. 5 (c).

29-10-34.

Finance Committee No. 2 (i) of 14-12-34. Application from certain members of the staff in the matter of payment of Indian Science Congress bonus; of Churnu Duftry for increase of pay; from Assistant Pandit B. B. Mukherjee for increase of pay. Recommendation: Refer to Staff Committee. Accepted by Council.

No. 6.

17-12-34.

#### JUBILEE CELEBRATIONS—

Congratulations to, and reply thereto from, Sir George Grierson in connection with the 150th Anniversary Celebrations. Record.

No. 1.

29-1-34.

Recommendations of the Jubilee Celebration Committee. Approve. A further appeal for financial contributions to be issued. An amalgamated index of the Society's publications during its first 150 years to be prepared but not to be included in the Memorial Volume but in the Journal.

No. 12.

26-2-34.

Finance Committee No. 2 of 14-12-34. Surplus under heading Jubilee Celebrations. Recommendation: That any surplus left over under the heading Anniversary Jubilee Celebrations be funded for future expenditure connected with its specific purpose. Accepted by Council.

No. 6.

17-12-34.

#### KAMALA LECTURESHIP—

Representation of the Society on the Selection Committee, Kamala Lectureship, Calcutta University. Dr. Brahmachari to be Society's representative.

No. 7.

30-4-34.

#### LECTURES—

General Lectures. The General Secretary reported that the following lectures had been arranged:—

Friday, August 31st, 6-15 p.m.

Lecture: Dr. S. L. Hora, D.Sc., F.R.S.E., F.L.S., F.Z.S., F.A.S.B.

Subject: Trade in Live Fish (Jiol Machh) in Calcutta.

Friday, September 7th, 6-15 p.m.

Lecturer: J. B. Auden, Esq., M.A., F.G.S.

Subject: The North Bihar Earthquake of the 15th January, 1934.

Saturday, September 15th, 6-30 p.m.

Lecturer: Dr. Meghnad Saha, D.Sc., F.R.S., F.A.S.B.

Subject: The fundamental Constituents of Matter.

Friday, September 21st, 6-15 p.m.

Lecturer: Dr. M. R. Sahni, M.A., D.Sc.

Subject: The Shan Hinterland: the Country and its People.

Record with thanks to the President.

No. 11.

27-8-34.

Public Lectures. Letter of thanks to be issued to the Lecturers.

No. 9.

24-9-34.

#### **LIBRARY—**

Fixing price for the new Library Catalogue. Accept General Secretary's proposals.

No. 6.

30-4-34.

Recommendation, Library Committee No. 2 of 30-4-34. The question of subscribing to the Vedic publications of the Indian Research Institute, Calcutta. Decline. Accepted by Council.

No. 11.

30-4-34.

Library Re-Organization Sub-Committee No. 1 of 6-3-34. Recommended that in the opinion of the Sub-Committee, in the present financial position of the Society, the present annual expenditure on purchase of new publications of Rs. 2,000 is reasonable. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 3 of 6-3-34. Recommended that the bookbinding grant be closely scrutinized towards the end of the current financial year (which may be taken as a normal year, arrears having practically been made good) with a view to possible re-assessment. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 4 of 6-3-34. Recommended that attention be drawn from time to time to the Permanent Library Endowment Fund with a view to obtaining further contributions, and that in the meantime a budgetary allotment be annually made to supply the difference between annual interest and the amount necessary for annual purchase of a further paper of Rs. 1,000 until the investments have reached Rs. 30,000. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 1 of 12-3-34. Recommended that in the opinion of the Committee the running expenses of the Library administration, calculated at Rs. 4,300 per annum, seem too high. Council Order: Postpone.

No. 13.

30-4-34.

Price of Library Catalogue. General Secretary to be authorized to use his discretion in the supply of free copies to Institutions and Departments or in fixing special rates. A complimentary copy to be supplied to Dr. Baini Prashad.

No. 6.

28-5-34.

Recommendation Finance Committee No. 4 of 25-7-34. Advance subscription to World List of Scientific Periodicals. Remit reduced advance subscription before the end of the month in anticipation of sanction. Accepted by Council.

No. 6.

30-7-34.

#### LOAN OF BOOKS AND MSS.—

Report on Manuscripts lent out during March and April. Decline the loan requests from (1) Rajkumar Raghbir Singh of Sitamau, and (2) The Hon'ble Major Nawab Md. Akbar Khan, Khan of Hoti, N.W.F.P.

No. 9.

30-4-34.

Library Re-Organization Sub-Committee No. 2 of 6-3-34. Recommended that an administration fee be required for manuscripts out on loan: (a) in India after the completion of three months; (b) beyond India after the completion of six months. Council Order: Postpone.

No. 13.

30-4-34.

#### MANUSCRIPTS—

Report on the activities of the Society's Arabic and Persian Department. Record.

No. 1.

17-12-34.

#### MEMBERSHIP—

Lists of Members in arrears with subscriptions for four or more quarters. List No. 1, 19 names, and List No. 2, 16 names. Apply Rules.

No. 15.

30-4-34

Recommendation Finance Committee No. 5 of 24-8-34. Lists of members who are in arrears of subscriptions for four or more quarters. Apply Rules. Accepted by Council.

No. 6.

27-8-34.

Lists of members in arrears with subscriptions for four or more quarters. List No. 1, 25 names, List No. 2, 11 names, and List No. 3, 30 names. Apply Rules.

No. 12.

27-8-34.

Recommendation Finance Committee No. 3 of 29-10-34. Lists of members who are in arrears with subscriptions for four or more quarters. Apply Rules. Accepted by Council.

No. 6

29-10-34.

List of members in arrears with subscriptions for four or more quarters. List No. 1, 19 names, List No. 2, 12 names, and List No. 3, 16 names. Apply Rules.

No. 10.

29-10-34.

Removal of 14 names under Rule 38. Apply Rules, except in the case of Nos. 6, 9, 10, 11, 12 and 14.

No. 3.

26-11-34.

#### MEMORIALS -

Donation from Sir U. N. Brahmachari to meet the deficit for the year in 'Sir William Jones Memorial Medal Fund'. Record with thanks to the donor.

No. 2.

27-8-34.

Framing of Regulations for the award of 'The Indian Science Congress Calcutta Medal'. Accept Regulations as proposed with Dr. Fermor's emendation.

No. 1.

29-10-34.

Appointment of Advisory Board for the award of Sir William Jones Memorial Medal. The Board to consist of Messrs. Fermor, Chopra, Bains Prashad, Guha, and the General Secretary.

No. 5 (a).

29-10-34.

Appointment of Advisory Board for the award of Bruhl Memorial Medal. The Board to consist of Messrs. Fermor, Bains Prashad, Calder, Sir U. N. Brahmachari, and the General Secretary.

No. 5 (b).

29-10-34.

Appointment of Advisory Board for the award of Indian Science Congress Calcutta Medal. The Board to consist of the five officials mentioned in the Rules.

No. 5 (c).

29-10-34.

#### MEETINGS—

General Meetings and Council Meetings during recess months, September and October. General Meetings and Council Meetings to be held as usual during the recess months.

No. 10.

27-8-34.

Consideration of the programme of the Ordinary Monthly Meeting, January, 1935. No meeting in January. Routine items to be deferred to the next meeting.

No. 11.

17-12-34.

#### MISCELLANEOUS

Dr. Hora drew attention to a printed slip bearing his initials attempting to influence the voting in the Annual Meeting of the Society in February and which had been circulated without his knowledge.

After discussion on a proposal by Dr. Brahmachari, seconded by Dr. Bains Prashad, it was resolved *nem con* to record the entire confidence of the Council in the General Secretary and the Honorary Treasurer.

No. 2. (Special Council).

13-2-34.

French decoration to the General Secretary. Record.

No. 4.

30-7-34.

Notice of the decease of Le R. P. Pirey, a Corresponding Member of the French School of the Far East. Record and announce. Letter of condolence approved.

No. 1.

27-8-34.

Report outbreak of fire in the Society's building. Record.

No. 2.

24-9-34.

Article from the 10th Anniversary Number of the Calcutta Municipal Gazette. Record.

No. 2.

17-12-34.

#### NATIONAL INSTITUTE OF SCIENCES OF INDIA--

Proposed National Institute of Sciences of India. Dr. Fermor reported the present position in connection with the above matter.

Drs. A. M. Heron, J. N. Mukherjee, and B. Prashad to be requested to draw up a scheme and to place this together with the consequential proposals before the members of Council to consider and discuss in the next meeting of the Council.

No. 10.

24-9-34.

Proposed National Institute of Sciences of India. The President to be authorized to offer hospitality to the Institute for its office in the Society's building.

No. 12.

29-10-34.

Proposed National Institute of Sciences of India; scheme and proposals regarding the Asiatic Society of Bengal. Dr. Heron and Dr. Mukherjee reported that the Sub-Committee was not able to report, but would do so in next meeting.

No. 13.

29-10-34.

The President reported concerning the present position with regard to the proposed National Institute of Sciences of India.

No. 9.

26-11-34.

The President placed before the Council for consideration the report of the Sub-Committee appointed in the October Meeting. To be circulated to the Members of Council with a request for an expression of opinion to constitute a basis for discussion in next meeting.

No. 10.

26-11-34.

Report Sub-Committee on question arising in connection with the proposed National Institute of Sciences of India.

Journal to be split up into two parts, Letters and Science, each with separate paging beginning with the volume for 1935; the Publication Committee to function, with its own Secretary, as an active body in application of Regulations 4 and 5 regarding the submission of communications for publication. Correspondence with the press through the General Secretary; consideration of other matters to stand over to a subsequent meeting.

No. 10.

17-12-34.

#### PRESENTATIONS --

Presentation by Sir David Ezra of a copy of the Descriptive Catalogue of Hebrew and Samaritan Manuscripts in the Sassoon Library, London. Cordial thanks to the donor.

No. 2.

26-2-34.

Presentation to the Society by M. J. Delacour of a copy of his work on the 'Birds of French Indo-China'. The Council's thanks to be conveyed to the donor.

No. 2.

30-4-34.

#### PROVIDENT FUND—

Finance Committee No. 3 (c) of 27-4-34. Application for a loan of Rs. 1,000 from Maulvi Shah Moinuddin Ahmad. Recommendation: Grant loan to maximum amount allowable under Provident Fund Rules at interest of 1%, and balance from Society's funds on compassionate grounds at interest of 3%. Repayment of Society's Fund loan portion to start at once in instalments of Rs. 25, when repaid repayment of balance to continue. Accepted by Council.

No. 10.

30-4-34.

Finance Committee No. 3 of 22-6-34. Application from N. Gupta for a loan of Rs. 200 from the Society's Provident Fund. Recommen-

dition. Recommend that the loan be granted at an interest of 3%, with a refund of Rs. 10 monthly. Accepted by Council.

No. 2.

25-6-34.

Recommendation Finance Committee No. 4 of 24-8-34. Application for a loan of Rs. 150 from the Provident Fund by Babu S. K. Roy. Recommend that the loan be granted at an interest of 3%, with a refund of Rs. 10 monthly. Accepted by Council.

No. 6.

27-8-34.

Recommendation Finance Committee No. 3 of 19-9-34. Report by the Honorary Treasurer of the conversion of 4½% Bonds 1934 for Rs. 5,000 (a/c Provident Fund) to the new 3% Bonds 1941. Approve. Approved by Council.

No. 5.

24-9-34.

#### PUBLICATIONS—

Publication Re-Organization Sub-Committee No. 1 of 25-2-34. Recommended that Vol. XXIX of the Journal be issued on the old basis without any change pending final recommendations. Council Order: Accept. Further ordered that Journal Vol. XXIX be issued without any change.

No. 10.

26-2-34.

Publication Re-Organization Sub-Committee No. 2 of 25-2-34. Circulate the 'Instructions to Authors' drawn up by Dr. Annandale for contributors to the Journal, with a view to reconsideration and possible extension or modification. Council order: Accept. Further ordered that Journal Vol. XXIX be issued without any change.

No. 10.

26-2-34.

Recommendations of the Jubilee Celebration Committee. Approve. A further appeal for financial contributions to be issued. An amalgamated index of the Society's publications during its first 150 years to be prepared but not to be included in the memorial volume but in the Journal.

No. 12.

26-2-34.

Fixing price for the new Library Catalogue. Accept General Secretary's proposals.

No. 6.

30-4-31.

Price of Library Catalogue. General Secretary to be authorized to use his discretion in supply of free copies to Institutions and Departments or in fixing special rates. A complimentary copy to be supplied to Dr. Baini Prasad.

No. 6.

28-5-34.

Request from Prof. N. Mironov that the Society may publish his edition of the *Saddharmapundarika* (Central Asian Manuscripts) with accompanying matter. Read and accept for publication in whatever form may be found most practicable.

No. 8.

25-6-34.

Proposal continuation of the Catalogue of Arabic Manuscripts. Accept proposal that Dr. Hidayat Hosain be placed in charge at a remuneration of Rs. 200 per mensem.

No. 3.

27-8-34.

Any other matter submitted. The President raised the question of issuing a periodical bulletin to all members primarily intended to communicate to them an abstract of the Proceedings of the General Meetings before the date of a next General Meeting. Unanimously agreed to.

No. 13.

27-8-34.

The President raised the question of the title of the new periodical bulletin to contain advance reports of the meetings of the Society. The name of the new periodical to be 'Advance Proceedings and Notices'. The present Proceedings to have the added sub-title 'Year-Book for such and such a year'.

No. 11.

24-9-34.

Publication Committee No. 2 of 26-11-34. Report by Dr. Hora concerning progress made with the publication of the Journal. Recommendation: Noted with thanks. Accepted by Council.

No. 6.

26-11-34.

Report sanction of grant towards the publication of the Descriptive Catalogue of Sanskrit Manuscripts. Record.

No. 4.

17-12-34.

#### RE-ORGANIZATION COMMITTEE—

Recommendations of the Re-Organization Committee. Accept.

No. 9.

26-2-34.

Publication Re-Organization Sub-Committee No. 1 of 25-2-34. Recommended that Vol. XXIX of the Journal be issued on the old basis without any change pending final recommendations. Council Order: Accept. Further ordered that Journal Vol. XXIX be issued without any change.

No. 10.

26-2-34.

Publication Re-Organization Sub-Committee No. 2 of 25-2-34. Circulate the 'Instructions to Authors' drawn up by Dr. Annandale for contributors to the Journal, with a view to reconsideration and possible extension or modification. Council order: Accept. Further ordered that Journal Vol. XXIX be issued without any change.

No. 10.

26-2-34.

Library Re-Organization Sub-Committee No. 1 of 6-3-34. Recommended that in the opinion of the Sub-Committee, in the present financial position of the Society, the present annual expenditure on purchase of new publications of Rs. 2,000 is reasonable. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 2 of 6-3-34. Recommended that an administration fee be required for manuscripts out on loan (a) in India after the completion of three months, (b) beyond India after the completion of six months. Council Order: Postpone.

No. 13.

30-4-34.

Library Re-organization Sub-Committee No. 3 of 6-3-34. Recommended that the bookbinding grant be closely scrutinized towards the end of the current financial year (which may be taken as a normal year, arrears having practically been made good) with a view to possible re-assessment. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 4 of 6-3-34. Recommended that attention be drawn from time to time to the Permanent Library Endowment Fund with a view to obtaining further contributions, and that in the meantime a budgetary allotment be annually made to supply the difference between annual interest and the amount necessary for annual purchase of a further paper of Rs. 1,000 until the investments have reached Rs. 30,000. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 5 of 6-3-34. Recommended that the exchange list, especially with regard to Orientalistic Journal be extended. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 1 of 12-3-34. Recommended that in the opinion of the committee the running expenses of the Library administration, calculated at Rs. 4,300 per annum, seem too high. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 2 of 12-3-34. Resolved to recommend that a special scrutiny be invited for the two posts of: (a) Assistant Librarian; (b) Assistant Maulvi. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 1 of 19-3-34. Read a memorandum by Dr. Heron and Dr. Mukherjee. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 2 of 19-3-34. The General Secretary suggested that the following appointments should be considered necessary: (a) Two typists of which at least one should be a Stenographer; (b) at least four peons; (c) a general archives clerk. Council order: Postpone.

No. 13.

30-4-34.

#### REPRESENTATION--

Representation of the Society at the International Congress of Anthropological and Ethnological Science. Dr. Guha, Mr. Chanda, and Dr. Bodding to be the Society's representatives.

No. 8.

30-4-34.

#### REQUESTS—

Request for the use of the Society's Hall by the Bengal Aftercare Association for Juveniles. Decline.

No. 3.

26-2-34.

Letter from Dr. D. Rangacharlu requesting that the Society should take over the Sri Vaikhanasa Press and the stock of published literature. Decline.

No. 4.

26-2-34.

Request for the use of the Society's Hall by the Mining and Geological Institute of India. Approve.

No. 3.

30-7-34.



## ROYAL CHARTER--

Consideration of the President's letter to the General Secretary, dated 11-5-34, suggesting: (a) that Society should apply for a Royal Charter; (b) the name under which the Royal Charter should be applied for. Unanimously resolved:

- (1) That the Council decides that an application for a Royal Charter should be made;
- (2) that the name and style should be 'Royal Asiatic Society of India (Asiatic Society of Bengal)';
- (3) that a voting paper be sent out to all members under Rules 64 and 78 asking for approval of each proposal separately;
- (4) that a Committee consisting of Dr. Brahmachari, Dr. Heron, and the General Secretary be empowered to draft the voting paper;
- (5) that the voting paper should be sent out before June 2nd in order to count the votes under Rule 65;
- (6) that the above Sub-Committee may prepare drafts of any other documents to be issued in connection with the application;
- (7) that an informal letter may be sent to the Government informing them of and explaining the above resolutions.

No. 1 (Special Council).

25-5-34.

Consideration of Rule 64 (a). That in view of the prescription of Rule 64 (a), resolution No. 5, of the Special Council Meeting held on the 25th May, 1934, be modified so as to comply with the Rule by sending out the voting paper after the next Ordinary Monthly Meeting. That a statement be issued before the next Ordinary Monthly Meeting as required by the article. That the General Secretary report the general drift of the discussions under this point to the President.

No. 7.

28-5-34.

**CHARTER:** Resolved to formulate the vote to be sent out to members as follows: (a) That the Society do make an application for the receipt of a Royal Charter for the incorporation of the Society; (b) that the application do contain the request that the Charter may be granted under a name and style preserving the elements of the present name, together with an indication of the All-India character of the Society, as for instance a name of the type of the 'Asiatic Society of Bengal, Royal Asiatic Society of India' with such variations as the Authority granting the Charter may require; (c) that the Council be hereby authorized to make the necessary consequential alterations in the existing Rules of the Society if and when the Charter be granted; (d) Dr. Heron and the General Secretary to be authorized to draw up the voting paper and an accompanying circular.

No. 6.

25-6-34.

Matters relating to the application for a Royal Charter.

Considered the letter from the Private Secretary to His Excellency the Governor of Bengal, dated the 8th August, 1934, written on the latter's behalf.

It was decided to record as the unanimous opinion of the Council that the advice given in the letter should be accepted; that the real intention of the Society had been from the beginning to ask for Royal recognition as distinct from legal incorporation by Royal Charter; and that at this stage no other change of name should be asked for except the addition of the title 'Royal'.

Resolved: That a Sub-Committee be formed, consisting of the President, General Secretary, and Dr. Heron, to draft the next letters to be issued in connection with this matter.

No. 4.

27-8-34

## RULES AND REGULATIONS—

Framing of Regulations for the award of 'The Indian Science Congress Calcutta Medal'. Accept Regulations as proposed with Dr. Fermor's emendation.

No. 1.

29-10-34.

## STAFF—

Report death of the Jamadar of the Society. Record with regret.  
No. 3.

29-1-34.

Petition from the late Jamadar's son for financial assistance, etc. Refer to the Re-Organization Committee. The senior chaprassi to be taken in his place on probation.

No. 4.

29-1-34.

Finance Committee No. 3 (c) of 27-4-34. Application for a loan of Rs. 1,000 from Maulvi Shah Moinuddin Ahmad. Recommendation: Grant loan to maximum amount allowable under Provident Fund Rules at interest of 1%, and balance from Society's funds on compassionate grounds at interest of 3%. Repayment of Society's Fund loan portion to start at once in instalments of Rs. 25, when repaid repayment of balance to continue. Accepted by Council.

No. 10.

30-4-34.

Library Re-Organization Sub-Committee No. 2 of 12-3-34. Resolved to recommend that a special scrutiny be invited for the two posts of: (a) Assistant Librarian; (b) Assistant Maulvi. Council order: Postpone.

No. 13.

30-4-34.

Library Re-Organization Sub-Committee No. 2 of 19-3-34. The General Secretary suggested that the following appointments should be considered necessary: (a) Two typists of which at least one should be a Stenographer; (b) at least four peons; (c) a general archives clerk. Council order: Postpone.

No. 13.

30-4-34.

Finance Committee No. 3 of 22-6-34. Application from N. Gupta for a loan of Rs. 200 from the Society's Provident Fund. Recommendation: Recommend that the loan be granted at an interest of 3%, with a refund of Rs. 10 monthly. Accepted by Council.

No. 2.

25-6-34.

Finance Committee No. 4 of 22-6-34. Application from the Cashier for three months sick leave. Recommendation: Grant if office arrangements can be made avoiding extra expenditure. Accepted by Council.

No. 2.

25-6-34.

Recommendation Finance Committee No. 4 of 24-8-34. Application for a loan of Rs. 150 from the Provident Fund by S. K. Roy. Recommendation: Recommend that the loan be granted at an interest of 3%, with a refund of Rs. 10 monthly. Accepted by Council.

No. 6.

27-8-34.

Report absence of staff owing to sickness. Record.  
No. 3.

24-9-34.

Application from Mr. H. A. Brown. Issue notice before the end of the month that his services are dispensed with and tender one month's salary in lieu of notice.

No. 2.

29-10-34.

Appointment of a special man in the Library to dust the Sanskrit Manuscripts. The Staff Sub-Committee to consider.

No. 11.

29-10-34.

Staff. The Staff Sub-Committee to consider the present position arising out of the termination of service of the Stenotypist and to report as soon as convenient.

No. 14.

29-10-34.

Finance Committee No. 4 of 23-11-34. Resignation of Cashier. Recommendation: Accept from date convenient to Council after 1st February, 1935. Council order: Cashier's resignation accepted. B. M. Chakravarti to take his place. Question of salary and security deposit may be considered by the Staff Sub-Committee.

No. 4.

26-11-34.

Finance Committee No. 2 (g) of 14-12-34. Increment of salaries to staff. Recommendation: Refer to Staff Sub-Committee. Accepted by Council.

No. 6.

17-12-34.

Finance Committee No. 2 (i) of 14-12-34. Application from certain members of the staff in the matter of payment of Indian Science Congress bonus; of Chhunu duftry for increase of pay; from Assistant Pandit B. B. Mukherjee for increase of pay. Recommendation: Refer to Staff Sub-Committee. Accepted by Council.

No. 6.

12-12-34.

#### VISITS—

Report visit to the Society of Mr. Ramachandra, I.C.S., Joint Secretary, Department of Education, Health and Lands, Government of India. Record.

No. 1.

30-4-34.

**List of  
Patrons,  
Officers, Council Members, Members,  
Fellows, and Medallists  
of the  
Asiatic Society of Bengal,  
On the 31st December, 1934.**

# **PATRONS OF THE ASIATIC SOCIETY OF BENGAL.**

1931	..	..	H.E. the Earl of Willingdon, G.M.S.I., G.C.M.G., G.M.I.E., G.B.E., Viceroy and Governor- General of India.
1932	..	..	H.E. the Right Honourable Sir John Anderson, P.C., G.C.B., G.C.I.E., Governor of Bengal.
1910-1916		..	Lord Hardinge of Penshurst, K.G., P.C., G.C.B., G.C.M.G., G.C.S.I., G.C.I.E., G.C.V.O., I.S.O.
1917-1922		..	Marquess of Zetland, P.C., G.C.S.I., G.C.I.E.
1921-1926		..	Earl of Reading, G.C.B., P.C., G.C.V.O., G.B.E.
1922-1927		..	Earl of Lytton, P.C., G.C.S.I., G.C.I.E.
1926-1931		..	Viscount Halifax, K.G., P.C., G.C.S.I., G.C.I.E.
1927-1932		..	Colonel Sir Francis Stanley Jackson, P.C., G.C.I.E.

# OFFICERS AND MEMBERS OF COUNCIL OF THE ASIATIC SOCIETY OF BENGAL DURING THE YEAR 1934.

## Elections Annual Meeting.

### *President*

L. L. Fermor, Esq., O.B.E., D.Sc. (London), A.R.S.M., F.G.S., M. Inst. M.M., F.A.S.B.

### *Vice-Presidents.*

Sir R. N. Mookerjee, K.C.I.E., K.C.V.O., D.Sc., M.I.M.E., M.I.E. (Ind.), Hon. F.A.S.B.

Sir David Ezra, Kt., F.Z.S., M.B.O.U.

Rai Upendra Nath Brahmachari, Bahadur, M.A., M.D., Ph.D., F.S.M.F., F.A.S.B.

Lt.-Col. R. Knowles, B.A. (Cantab.), M.R.C.S., L.R.C.P., I.M.S., F.A.S.B.

### *Secretaries and Treasurer.*

General Secretary :—Johan van Manen, Esq., C.I.E., F.A.S.B.

Treasurer :—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S., F.R.S.E., F.A.S.B.

Philological Secretary :—S. K. Chatterji, Esq., M.A., D.Lit. (Lond.).

Joint Philological Secretary :—Shamsu'l 'Ulama Mawlawi M. Hidayat Hosain, Khan Bahadur, Ph.D., F.A.S.B.

Natural History Secretaries.  $\left\{ \begin{array}{l} \text{Biology :—Baini Prashad, Esq., D.Sc., F.Z.S.,} \\ \text{F.R.S.E., F.A.S.B.} \\ \text{Physical Science :—J. N. Mukherjee, Esq., D.Sc.} \\ \text{(Lond.), F.C.S. (Lond.).} \end{array} \right.$

Anthropological Secretary :—B. S. Guha, Esq., M.A., Ph.D. (Harvard).

Medical Secretary :—Lt.-Col. R. N. Chopra, C.I.E., M.A., M.B., I.M.S., F.A.S.B.

Library Secretary :—A. M. Heron, Esq., D.Sc. (Edin.), F.G.S., F.R.G.S., F.R.S.E.

### *Other Members of Council.*

The Hon'ble Mr. Justice C. C. Ghose, Kt., Barrister-at-Law.

M. Mahfuz-ul Haq, Esq., M.A.

L. R. Fawcus, Esq., B.A. (Cantab.), I.C.S.

Percy Brown, Esq., A.R.C.A.

K. N. Dikshit, Esq., M.A.

J. M. Bottomley, Esq. B.A. (Oxon), I.E.S.

### APPOINTMENTS, TRANSFERS, ETC. DURING THE YEAR.

Sir C. C. Ghose resigned his seat on the Council on the 30th April owing to his ill-health.

The Hon'ble Sir B. L. Mitter was co-opted a Council Member on the 2nd July.

Mr. Johan van Manen, Acting Honorary Treasurer, *vice* Dr. S. L. Hora, absent, from 25-5-34 to 18-6-34.

Mr. Dikshit, absent from 1-3-34 to 1-11-34.

Mr. Fawcus, absent from 4-4-34 to the end of the year.

Dr. Fermor, absent from 7-3-34 to 1-4-34; from 15-4-34 to 1-8-34; and from 25-9-34 to 24-10-34.

Dr. Heron, absent from 25-3-34 to 20-4-34 and from 27-11-34 to the end of the year.

Dr. J. N. Mukherjee, absent from 24-3-34 to 10-4-34.

Sir David Ezra, absent from 12-4-34 to 1-11-34.

Col. Chopra, absent from 14-4-34 to 12-8-34.

Mr. Haq, absent from 1-5-34 to 1-7-34 and from 6-10-34 to 15-11-34.

Sir U. N. Brahmachari, absent from 1-6-34 to 1-7-34 and from 10-10-34 to 1-11-34.

Dr. Guha, absent from 15-7-34 to the end of the year.

Dr. Prashad, absent from 14-8-34 to 31-8-34.

Sir B. L. Mitter, absent from 1-9-34 to 1-11-34.

**OFFICERS AND MEMBERS OF COUNCIL OF  
THE ASIATIC SOCIETY OF BENGAL  
ELECTED FOR THE YEAR 1935.**

*President.*

**L. L. Fermor, Esq., O.B.E., A.R.S.M., D.Sc. (London), F.G.S.,  
M.Inst.M.M., F.R.S., F.A.S.B**

*Vice-Presidents.*

**Sir David Ezra, Kt., F.Z.S., M.B.O.U.**

**Rai Sir Upendra Nath Brahmachari Bahadur, Kt., M.A., M.D.,  
Ph.D., F.S.M.F., F.A.S.B.**

**Lt.-Col. R. Knowles, B.A. (Cantab.), M.R.C.S., L.R.C.P.,  
I.M.S., F.A.S.B.**

**The Hon'ble Sir B. L. Mitter, K.C.S.I., Kt., Barrister-at-Law.**

*Secretaries and Treasurer.*

**General Secretary :—Johan van Manen, Esq., C.I.E., F.A.S.B.  
Treasurer :—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S., F.R.S.E.,  
F.A.S.B.**

**Philological Secretary :—S. K. Chatterji, Esq., M.A., D.Lit.  
(Lond.).**

**Joint Philological Secretary :—Shamsu'l 'Ulama Mawlawi  
M. Hidayat Hosain, Khan Bahadur, Ph.D., F.A.S.B.**

**Natural History Secretaries. { Biology :—Baini Prashad, Esq., D.Sc., F.Z.S.,  
F.R.S.E., F.A.S.B.  
Physical Science :—J. N. Mukherjee, Esq.,  
D.Sc. (Lond.) F.C.S. (Lond.).**

**Anthropological Secretary :—Rai Bahadur Ramaprasad Chanda,  
B.A., F.A.S.B.**

**Medical Secretary :—Lt.-Col. R. N. Chopra, C.I.E., M.A., M.B.,  
I.M.S., F.A.S.B.**

**Library Secretary :—A. M. Heron, Esq., D.Sc. (Edin.), F.G.S.,  
F.R.G.S., F.R.S.E.**

*Other Members of Council.*

**L. R. Fawcus, Esq., B.A. (Cantab.), I.C.S.**

**Percy Brown, Esq., A.R.C.A., F.A.S.B.**

**The Hon'ble Mr. Justice J. Lort-Williams, K.C., Barrister-at-Law.**

**C. C. Calder, Esq., B.Sc., F.L.S.**

**N. G. Majumdar, Esq., M.A.**

## ORDINARY MEMBERS.

R=Resident. N=Non-Resident. F=Foreign. A=Absent. L=Life.

An Asterisk is prefixed to names of Ordinary Fellows of the Society.

Date of Election.		
5-4-22	R	<b>Abdul Ali</b> , ABUL FAIZ MUHAMMAD, M.A., M.R.A.S., F.R.S.L. F.R.G.S., F.R.H.S. 3, Turner Street, Calcutta.
7-3-27	R	<b>Abdul Kadir</b> , A. F. M., M.A. (ALLAHABAD), MAULVIE FAZI (PUNJAB), MADRASSAH FINAL (CALCUTTA), <i>Professor Islamia College</i> . 19, Wellesley Square, Calcutta.
2-11-25	N	<b>Acharya</b> , PARAMANANDA, B.SC., <i>Archæological Scholar</i> Mayurbhanj State, Baripada.
2-3-21	A	* <b>Acton</b> , HUGH WILLIAM, C.I.E., M.R.C.S., L.R.C.P., F.A.S.B. LT.-COL., I.M.S. <i>School of Tropical Medicine and Hygiene</i> Chittaranjan Avenue, Calcutta
2-3-21	R	<b>Agharkar</b> , SHANKAR PURUSHOTTAM, M.A., PH.D., F.L.S. <i>Sir Rash Behari Ghose Professor of Botany, Calcutta University</i> . 35, Ballygunge Circular Road, Calcutta.
1-1-34	N	<b>Ahmad</b> , MIAN JAMAL-UD-DIN, B.A., B.T. <i>Member, Bureau of Education, Afghanistan</i> . 2, Andarabi, Kabul, Afghanistan
7-4-30	N	<b>Ahmad</b> , SYED KHALIL, <i>Provincial Service (retired)</i> . Zafa Manzil, Gaya.
6-6-17	N	<b>Aiyangar</b> , K. V. RANGASWAMI, RAO BAHADUR, M.A. <i>Late Director of Public Instruction, Travancore; Principal Central Hindu College, Hindu University</i> . Benares.
6-12-26	N	* <b>Aiyangar</b> , S KRISHNASWAMI, M.A., PH.D., M.R.A.S. F.R.HIST.S., F.A.S.B., <i>Rajasevasakta, Professor, University of Madras</i> . "Sripadam", 143, Brodies Road, Mylapore Madras, S.
1-12-20	N	<b>Akbar Khan</b> , THE HON'BLE MAJOR NAWAB SIR MOHAMMED K.B.E., C.I.E., <i>Khan of Hoti</i> . Hoti, N.-W.F.P.
3-7-12	F	<b>Andrews</b> , EGBERT ARTHUR, B.A. c/o The Royal Empire Society, Northumberland Avenue, London, W.C.
3-3-30	L	<b>Ashton</b> , HUBERT SHORROCK, <i>Merchant</i> . Trueloves, Ingates tone, Essex, England.
3-9-34	R	<b>Auden</b> , JOHN BICKNELL, M.A. (CANTAB.) F.G.S., <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
3-11-30	R	<b>Austin</b> , GEORGE JOHN, <i>Sanitary Engineer, Messrs. J. B Norton &amp; Sons. Ltd.</i> Norton Building, Lalbazar, Calcutta
4-4-17	N	<b>Awati</b> , P. R., B.A. (CANTAB.), D.I.C., I.E.S., <i>Professor of Zoology</i> . Royal Institute of Science, Mayo Road, Fort, Bombay.
3-3-14	L	* <b>Bacot</b> , J., F.A.S.B. Boulevard Saint-Antoine, 61 Versailles Seine-et-Oise, France.
1-11-26	R	<b>Bagchi</b> , PROBODH CHANDRA, M.A., DR.-ES-LETTRES (PARIS), <i>Member of the A.S. of Paris; Lecturer, Calcutta University</i> . 9, Rustomjee Street, Ballygunge, Calcutta.



Date of Election.		
1-3-26	R	<b>Bagnall, JOHN FREDERICK, B.Sc., A.M.I.Mech.E., A.M.I.E.E., A.M.I.Struct.E., M.R.San.I., A.M.Inst.C.E., Chartered Civil Engineer Consulting Engineer, Macneill &amp; Co. 18/4, Ballygunge Circular Road, Calcutta.</b>
2-4-24	N	<b>Bahl, K. N., D.Sc., D.Phil., Professor of Zoology, Lucknow University. Badshahbagh, Lucknow.</b>
7-3-27	F	<b>Bake, A. A., Doctorandus Or. Lit. P.O. Santiniketan. (c/o The Kern Institute, Leiden, Holland.)</b>
6-2-18	N	<b>Banerjee, NARENDRA NATH, M.I.P.O.E.E., A.M.I.E., Director of Telegraphs, Bombay Circle, Bombay.</b>
5-3-24	R	<b>Banerjee, P. N., M.A. (CANTAB.), A.M.I.E., F.C.U., Civil Engineer. 12, Mission Row, Calcutta.</b>
1-11-26	N	<b>Barhut, THAKUR KISHORESINGH Ji, State Historian of Patiala Government. History and Research Department, Patiala</b>
3-8-31	N	<b>Barua, THE HON'BLE KANAK LAL, RAI BAHADUR, B.L., F.R.S.E., President, Kamarupa Anusundhan Samiti, Minister to the Government of Assam. Rosaville, Nangthymai, Shillong, Assam.</b>
3-12-23	R	<b>Barwell, N. F., LT.-COL (RETD.), M.C., M.A., Bar-at-Law. First Floor, 10, Middleton Street, Calcutta (and) Aylmerton House, Aylmerton, Norfolk, England.</b>
6-1-30	A	<b>Bassewitz, COUNT, late Consul-General for Germany. Europe.</b>
4-3-29	R	<b>Basu, THE HON'BLE BEJOY K., C.I.E., M.A., B.L., Solicitor, High Court. 50, Goaltule Road, Bhawanipore, Calcutta</b>
3-12-24	R	<b>Basu, JATINDRA NATH, M.A., M.L.C., Solicitor. 14, Baloram Ghose Street, Calcutta.</b>
1-3-26	R	<b>Basu, NARENDRA KUMAR, M.L.C., Advocate, High Court. 12, Ashu Biswas Road, Bhawanipore, Calcutta.</b>
2-1-28	R	<b>Basu, NARENDRA MOHAN, M.Sc., Professor of Physiology. 63, Hindusthan Park, Ballygunge, Calcutta.</b>
7-5-28	R	<b>Basu, NARENDRANATH, L.M.S., Professor of Obstetrics and Gynaecology, Carmichael Medical College 7, Raja Bagan Street, Calcutta</b>
7-1-29	R	<b>Basu, SARAT CHANDRA, Advocate. 143, Dhurumtollah Street, Calcutta</b>
5-2-34	N	<b>Bates, WILLIAM HAYES, Ceramic Engineer, Burn &amp; Co., Ltd. Ranigunj, Dt. Burdwan.</b>
7-7-09	N	<b>Bazaz, RANGNATH KHEMRAJ, Proprietor, Shri Venkateshwar Press. 7th Khetwadi, Bombay No. 4.</b>
3-7-95	L	<b>Beatson-Bell, REV. SIR NICHOLAS DODD, K.C.S.I., K.C.I.E. Edgecliffe, St. Andrews, Scotland.</b>
7-5-34	R	<b>Bent, WILLIAM ANTONY, Assistant, Messrs. George Henderson &amp; Co., Ltd. 101/1, Clive Street, Calcutta.</b>
4-3-25	R	<b>Benthall, SIR EDWARD C., KT., Merchant. 37, Ballygunge Park, Calcutta.</b>
7-4-09	L	<b>*Bentley, CHARLES A., C.I.E., M.B., D.P.H., D.T.M. &amp; H., F.A.S.B., Professor of Hygiene. University of Egypt, Cairo.</b>
4-11-29	R	<b>Berthoud, GEORGE FELIX, Stock-broker. 12, Russell Street, Calcutta.</b>
4-6-28	N	<b>Bhadra, SATYENDRA NATH, RAI BAHADUR, M.A., Principal, Jaqannath Intermediate College. Nayabazar, Dacca.</b>
1-8-17	R	<b>*Bhandarkar, DEVADATTA RAMKRISHNA, M.A., PH.D., F.A.S.B. 10, Ritchie Road, Ballygunge, Calcutta.</b>
5-4-26	N	<b>Bhatia, M. L., M.Sc., Lecturer in Zoology. Lucknow University, Lucknow.</b>

Date of Election.		
4-11-08	R	<b>Bhattacharya, BISVESVAR, B.A., M.B.A.S.</b> 16, Townshend Road, Bhawanipore, Calcutta.
1-2-22	N	<b>Bhattacharya, VIDHUSHEKHARA, PANDIT, Principal, Vidyabhavana.</b> Visvabharati, Santiniketan, Birbhum.
7-7-24	L	<b>Bhattacharyya, BINOYTOSH, M.A., PH.D., Rajaratna, General Editor, Gaekwad's Oriental Series, and Librarian, Oriental Collections, Baroda State.</b> Baroda.
2-4-28	R	<b>Bhattacharyya, NIBARAN CHANDRA, M.A., Professor of Physiology, Presidency College.</b> 19, Hindusthan Road, Ballygunge, Calcutta.
9-6-22	R	<b>Bhattacharyya, SIVAPADA, M.D.</b> 48B, Kailas Bose Street, Calcutta.
4-6-28	N	<b>Bhattasali, NALINI KANTA, M.A., PH.D., Curator, Dacca Museum.</b> Ramna, Dacca.
6-4-31	R	<b>Bhose, JOTISH CHANDER, M.A., B.L., Advocate, Calcutta High Court.</b> 244, Ray Bagan Street, Calcutta.
5-2-34	N	<b>Bhuyan, NIKHYA KUMAR, M.A., B.L., A.E.S., Honorary Provincial Director of Historical and Antiquarian Studies, Assam; Professor, Cotton College.</b> Gauhati, Assam.
5-3-28	R	<b>Biswas, CHARU CHANDRA, C.I.E., M.A., B.L., Advocate, High Court.</b> 58, Puddopukur Road, P.O. Elgin Road, Calcutta.
1-8-23	R	<b>Biswas, KALIPADA, M.A.</b> Royal Botanic Garden, Sibpur, Howrah
3-1-27	N	<b>Bivar, HUGH GODFREY STUART, I.C.S., District and Sessions Judge.</b> Murshidabad.
1-2-93	L	<b>*Bodding, REV. P. O., M.A (CHRIST.), F.A.S.B.</b> Gulleraasveien 27, Vettakollen, Oslo, Norway.
6-3-95	R	<b>*Bose, SIR JAGADIS CHANDRA, KT, C.S.I., C.I.E., F.R.S., M.A., D.S.C., F.A.S.B.</b> Bose Institute, 91, Upper Circular Road, Calcutta.
6-7-25	R	<b>Bose, MANMATHA MOHAN, M.A., Late Professor, Scottish Church College.</b> 19, Gokul Mitra Lane, Hatkhola, Calcutta.
2-3-31	N	<b>Bose, SUDHANSU KUMAR, B.S.C. (CAL.), A.R.S.M., B.S.C. (MINING), London, Professor of Mining and Surveying.</b> Indian School of Mines, Dhanbad.
5-11-28	N	<b>Bose MULLICK, G. N., M.A., Professor of History.</b> Meerut College, Meerut, U.P.
4-5-31	R	<b>Bottomley, JOHN MELLOR, B.A. (OXON), I.E.S., Director of Public Instruction, Bengal.</b> 1, Sunny Park, Ballygunge, Calcutta.
5-12-32	N	<b>Boyle, CECIL ALEXANDER, MAJOR, D.S.O., Adviser in Languages and Secretary to the Board of Examiners.</b> Army Headquarters, Simla.
1-1-08	L	<b>*Brahmachari, SIR UPENDRA NATH, KT., RAI BAHADUR, M.A., PH.D., M.D., F.S.M.F., F.A.S.B.</b> 82/3, Cornwallis Street, Calcutta.
7-11-27	N	<b>Brahmachary, SARAT CHANDRA, RAI BAHADUR, M.A., B.T.</b> Kasba Road, Ballygunge, P.O. Dhakuria, 24-Pergs.
3-7-07	L	<b>*Brown, JOHN COGGIN, O.B.E., D.S.C., F.G.S., M.I.M.E., M.INST.M.M., M.I.E., F.A.S.B.</b> c/o Messrs. Grindlay & Co., 54, Parliament Street, Westminster, London, S.W.1.
6-10-09	R	<b>*Brown, PERCY, A.R.C.A., F.A.S.B., Curator, Victoria Memorial, Calcutta.</b>
6-10-09	L	<b>*Brühl, PAUL JOHANNES, I.S.O., D.S.C., F.C.S., F.G.S., F.A.S.B.</b> 2, Convent Road, Bangalore.
8-1-96	F	<b>*Burn, SIR RICHARD, KT, C.S.I., F.A.S.B.</b> 9, Staverton Road, Oxford, England.

Date of Election.		
3-12-34	N	<b>Burt</b> , BRYCE CHUDLEIGH, C.I.E., M.B.E., B.Sc., I.A.S., <i>Agricultural Expert, Imperial Council of Agricultural Research</i> 1, York Road, New Delhi.
2-4-13	R	<b>Calder</b> , CHARLES CUMMING, B.Sc., F.L.S., <i>Superintendent Royal Botanic Garden.</i> Sibpur, Howrah.
4-11-29	R	<b>Campbell</b> , G. R., <i>Partner, Messrs. Mackinnon Mackenzie &amp; Co.</i> 16, Strand Road, Calcutta.
7-2-27	R	<b>Captain, DARA MANEKSHAW</b> , <i>Merchant.</i> 1, Corporation Street, Calcutta.
1-9-20	R	<b>Chakladar</b> , HARAN CHANDRA, M.A. 28/4, Srimohan Lane Kalighat, Calcutta.
7-3-32	R	<b>Chakraborty</b> , KHIRODE BEHARI, <i>Engineer and Manufacturer.</i> 7, Hindusthan Park, P.O Ballygunge, Calcutta.
4-7-27	R	<b>Chakravarti</b> , CHINTAHARAN, M.A., <i>Lecturer, Bethune College</i> 28/3, Sahanagar Road, Kalighat, Calcutta.
3-2-30	N	<b>Chakravarti</b> , M. N., M.Sc., A.T.S. "Gitanjali". 15, Lodge Road, Lahore.
3-3-09	R	<b>Chakravarti</b> , NILMANI, M.A., <i>Late Professor of Sanskrit and Pali, Presidency College.</i> Calcutta.
5-6-33	N	<b>Chakravarti</b> , SUSIL KUMAR, M.A., <i>Zemindar.</i> Cooch Behar (Cooch Behar State).
3-1-27	N	<b>Chakravarty</b> , NIRANJANPRASAD, M.A., PH.D. (CANTAB.), <i>Government Epigraphist.</i> Office of the Government Epigraphist, Ootacamund, Nilgiris, S. India.
6-1-30	A	<b>Chakraverti</b> , SHRISH CHANDRA, B.L., <i>Attorney-at-Law, High Court, Calcutta.</i> 2, Marquis Street, Calcutta.
1-9-20	R	<b>*Chanda</b> , RAMAPRASAD, RAI BAHADUR, B.A., F.A.S.B. P. 463, Manoharpukur Road, Kalighat, Calcutta.
3-1-06	L	<b>Chapman</b> , JOHN ALEXANDER, <i>Librarian, Rampur State Library.</i> Rampur.
7-5-28	R	<b>Chatterjea</b> , SIR NALINI RANJAN, KT., M.A., B.L., <i>Retired Judge and sometime acting Chief Justice, Calcutta.</i> 91A, Harish Mukerjee Road, Bhawanipore, Calcutta.
7-2-27	R	<b>Chatterjee</b> , ASHOKE, B.A. (CAL.), B.A. (CANTAB.), <i>Editor, "Welfare".</i> 91, Upper Circular Road, Calcutta.
27-10-15	F	<b>Chatterjee</b> , SIR ATUL CHANDRA, K.C.I.E., K.C.S.I., <i>Late High Commissioner for India.</i> Withean, Cavendish Road, Weybridge, Surrey, England.
1-10-20	R	<b>Chatterjee</b> , NIRMAL CHANDRA. 52, Haris Mukerjee Road, Bhawanipore, Calcutta.
4-7-27	R	<b>Chatterjee</b> , PATITPABON, M.A., B.L., <i>Vakil, High Court.</i> 84, Harrison Road, Calcutta
5-1-31	R	<b>Chatterji</b> , DURGACHARAN, M.A., P.R.S., <i>Lecturer in Sanskrit, Bethune College.</i> P. 317, Jatin Das Road, Kalighat, Calcutta.
4-6-34	N	<b>Chatterji</b> , BIJAN RAJ, PH.D. (London), D.LITT. (PUNJAB), <i>Professor of History, Meerut College.</i> Meerut.
7-5-28	R	<b>Chatterji</b> , KEDAR NATH, B.Sc. (LONDON), A.E.C.S. (LONDON). 43, Wellesley Street, Calcutta.
7-6-11	R	<b>Chatterji</b> , KARUNA KUMAR, LT.-COL., I.T.F., M.C., V.H.A.S. 6/1, Wood Street, Calcutta
6-8-24	R	<b>Chatterji</b> , SUNITI KUMAR, M.A. (CAL.), D.LIT. (LONDON), <i>Khaira Professor of Linguistics, Calcutta University.</i> "Sudharina", 16, Hindusthan Park, (off Rasbihari Avenue East End), Ballygunge, Calcutta.
5-11-24	R	<b>Chattopadhyay</b> , K. P., M.Sc., <i>Education Officer, Corporation of Calcutta.</i> 55/1, Old Ballygunge 1st Lane, Calcutta.

Date of Election.		
2-11-25	N	<b>Chattopadhyaya, KSHETRESA CHANDRA, M.A.,</b> <i>Lecturer in Sanskrit.</i> Allahabad University, Allahabad.
1-4-14	R	<b>Chaudhuri, GOPAL DAS.</b> 32, Beadon Row, Calcutta.
6-12-26	R	<b>Chokhani, SREENARAYAN,</b> <i>Secretary, Shree Hanuman Pustakalaya.</i> 8, New Ghuseri Road, Salkea, Howrah.
5-12-23	R	<b>Chopra, B. N., D.Sc., F.L.S.,</b> <i>Assistant Superintendent, Zoological Survey of India.</i> Indian Museum, Calcutta.
1-2-22	R	<b>*Chopra, R. N., C.I.E., M.A., M.D. (CANTAB.), LT.-COL., I.M.S., F.A.S.B.,</b> <i>Professor of Pharmacology.</i> School of Tropical Medicine and Hygiene, Chittaranjan Avenue, Calcutta.
5-11-28	R	<b>Chopra, GOPICHAND.</b> 47, Khangraputty, Calcutta.
5-12-27	L	<b>Chowdhury, SIR CHHAJURAM, KT., C.I.E., M.L.C.</b> 21, Belvedere Road, Calcutta.
2-4-28	R	<b>Chowdhury, RAI JATINDRANATH,</b> <i>Zemindar.</i> 36, Russa Road, Tollygunge, Calcutta.
3-7-07	L	<b>*Christie, WILLIAM ALEXANDER KYNOCH, B.Sc., PH.D., M.INST.M.M., F.A.S.B.</b> c/o The Lloyds Bank, 6, Pall Mall, London, S. W. 1.
3-11-09	A	<b>*Christophers, SIR SAMUEL RICKARD, KT., C.I.E., O.B.E., F.R.S., F.A.S.B., M.B., LT.-COL., I.M.S.</b> 80, Onslow Gardens, South Kensington, London, S.W. 7.
1-9-15	R	<b>Cleghorn, MAUDE LINA WEST (MISS), F.L.S., F.E.S.</b> 43, Moulahat Road, Calcutta.
1-2-32	F	<b>Clendenin, DAVID LAWRENCE, B.A. (Yale, 1928).</b> 32, East 64 Street, New York City, U.S.A.
2-2-31	R	<b>Clough, JOHN,</b> <i>Barriester-at-Law.</i> 17, Store Road, Ballygunge, Calcutta.
5-5-30	F	<b>Cooper, G. A. P.</b> 29, Eccleston Street, Eaton Square, London, S.W. 1.
6-11-33	R	<b>Coulson, ARTHUR LENNOX, D.Sc. (MELB.), D.I.C., F.G.S.</b> <i>Geological Survey of India,</i> 27, Chowringhee, Calcutta.
4-11-29	F	<b>*Cotter, (GERALD DE PURCELL, B.A., SC.D. (DUBLIN), M.INST.M.M., F.G.S., F.A.S.B.</b> "Norland", Manon Road, Buckinghamshire, England.
3-8-25	N	<b>Coyajee, SIR J. C., KT., B.A. (CANTAB.), LL.B., I.E.S. (RETD.).</b> Andhra University, Waltair, B.N.R.
5-3-34	R	<b>Craddock, SIR WALTER MERRY, KT., D.S.O., COLONEL, M.C.,</b> <i>Sheriff of Calcutta, Stock Broker.</i> Bengal Club, Calcutta.
25-8-87	R	<b>Criper, WILLIAM RISON, F.C.S., F.I.C., A.R.S.M.</b> Konnagar.
2-11-25	R	<b>Crookshank, HENRY, B.A., B.A.I. (DUBLIN),</b> <i>Assistant Superintendent, Geological Survey of India.</i> 27, Chowringhee, Calcutta.
7-3-32	R	<b>Darbari, M.D.,</b> <i>Incorporated Accountant, S.B. Billimoria &amp; Co., Ltd.</i> 100, Clive Street, Calcutta.
4-3-25	R	<b>Das, AJIT NATH, RAI BAHADUR, M.B.A.S., F.Z.S.,</b> <i>Zemindar.</i> 24, South Road, Entally, Calcutta.
2-7-28	R	<b>Das, PROBODH KUMAR, M.A., B.L.</b> P-84, Park Street Extension, Calcutta.
3-12-24	R	<b>Das, SURENDRA NATH, M.B.,</b> <i>Medical Practitioner.</i> 67, Nimtala Ghat Street, Calcutta.
6-9-22	R	<b>Das-Gupta, SURENDRA NATH, M.A., PH.D., I.E.S.,</b> <i>Principal, Sanskrit College.</i> 1, College Square, Calcutta.
1-3-26	R	<b>Datta, HIRENDRA NATH, M.A., B.L.,</b> <i>Solicitor, High Court.</i> 139, Cornwallis Street, Calcutta.
3-6-25	N	<b>Datta, S. K., B.A., M.B., CH.B. (EDIN.),</b> <i>Principal, Forman Christian College.</i> Lahore.

Date of Election		
4-6-34	R	Daver, NANABHOY SORABJI, B.A. (HONS.), <i>Mercantile</i> . c/o Parke, Davis & Co., 5, Dharamtola Street, Calcutta.
6-8-24	L	Davies, L. M., LT.-COL., LATE R.A., M.A., F.R.S.E., F.R.A.I., F.G.S. 8, Garscube Terrace, Murrayfield, Edinburgh, 12, Scotland.
4-3-29	A	De, J. C., M.B., LT.-COL., I.M.S., <i>Professor of Clinical Medicine, Medical College</i> . 229, Lower Circular Road, Calcutta.
19-9-95	L	De, KIBAN CHANDRA, C.I.E., B.A., I.C.S. (RETD.), <i>Manager, Nawab Bahadur of Murshidabad Estate</i> . Lalbagh, Murshidabad.
4-3-25	R	Deb, RAJA KSHITINDRA, RAI MAHASAI OF BANSBERIA RAJ. 21/E, Rani Sankari Lane, Kalighat, Calcutta.
5-12-32	N	Deb, SUSHIL KUMAR, B.A. Sheikghat, P.O. Sylhet, Dt. Assam.
5-12-27	L	Dechhen, H.H. MAHARANI KUNZANG, <i>Maharani of Sikkim</i> . Gangtok, Sikkim.
5-5-30	N	Deo, SIR PRATAP CHANDRA BHANJ, K.C.I.E., <i>Maharajah, Ruler of Mayurbhanj State</i> . P.O. Baripada, Mayurbhanj, B.N.R.
4-4-27	N	Dewick, REV EDWARD CHISHOLM, M.A. (CANTAB.), <i>Principal, N.M.S. College</i> . Gorakhpur.
4-5-10	L	Dhavlé, THE HON'BLE MR. JUSTICE SHANKAR BALAJI, B.A., I.C.S., <i>Judge, Patna High Court</i> Patna.
4-8-20	N	Dikshit, KASHINATH NARAYAN, M.A., c/o The Office of the Director-General of Archaeology, New Delhi.
5-1-98	R	Dods, WILLIAM KANE, <i>Agent, Hongkong and Shanghai Banking Corporation</i> . 6, Minto Park, Alipur, Calcutta.
2-2-31	N	Douglas, GORDON WATSON, B.SC., D.L.M., <i>State Chemist to the Government of Bhopal</i> . State Laboratory, Bhopal, Central India.
2-7-02	L	Doxey, FREDERICK. c/o J. Doxey, Esq., Brighton Villa, 97, Burnage Lane, Levenshulme, Manchester, England.
7-11-32	R	Driver, DARAB CURSETJI, M.A. (CANTAB.), <i>Barrister-at-Law, Constituted Attorney to Messrs Tata &amp; Sons, Ltd, Managing Agents for The Tata Iron &amp; Steel Co., Ltd</i> . 71/73, Park Street, Calcutta.
7-5-34	R	Duncan, PERCIVAL CAIRNCROSS, <i>Mercantile Assistant with Messrs. George Henderson &amp; Co., Ltd</i> 101/1, Clive Street, Calcutta.
1-7-29	A	Dunn, JOHN ALEXANDER, D.SC., D.I.C., F.G.S., <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
2-1-33	R	Dutch, ROBERT AUSTEN, B.A. (CANTAB.), I.C.S., <i>Joint Magistrate and Deputy Collector</i> . Barrackpur.
3-7-33	R	Dutt, GURU SADAY, <i>Barrister-at-Law</i> , I.C.S. 12, Loudon Street, Calcutta.
5-12-32	R	Dutt, NALINAKSHA, M.A., PH.D., D.LITT. (LOND.), <i>Lecturer, Calcutta University</i> . 91-1B, Manicktollah Street, Calcutta.
5-3-28	A	Eberl, OTTO, DR JUR., <i>Late Vice-Consul for Germany</i> . 2, Store Road, Ballygunge, Calcutta.
4-11-29	R	Edwards, L. BROOKE, <i>Manager in India. The Baldwin Loco. Works of Philadelphia, U.S.A.</i> 5, Dalhousie Square, Calcutta.
7-12-31	F	Eliade, MIRCEA, <i>Docteur en Philosophie, Conferentiaire Universitaire</i> . 1 Str. Melodieii, Bucharest (1).
5-1-31	L	Evans, PERCY, B.A. (CANTAB.), F.G.S., <i>Geologist</i> . c/o The Burma Oil Co., Digboi, Assam.

Date of Election.		
6-2-28	L	Ezra, SIR DAVID, KT., F.Z.S., M.B.O.U. 3, Kyd Street, Calcutta.
2-12-29	A	Fawcus, LOUIS REGINALD, B.A. (CANTAB.), <i>Indian Civil Service</i> . 13, Loudon Street, Calcutta.
3-8-04	R	*Fermor, LEWIS LEIGH, O.B.E., M.INST.M.M., D.SC., A.R.S.M., F.G.S., F.R.S., F.A.S.B., <i>Director, Geological Survey of India</i> , 27, Chowringhee, Calcutta.
31-10-06	F	Finlow, ROBERT STEEL, C.I.E., B.SC., F.I.C., <i>Late Director of Agriculture, Bengal</i> . c/o Messrs. Grindlay & Co., Ltd., 54, Parliament Street, London, S.W. 1.
2-12-29	F	Fisher, REV. FREDERICK B., S.T.B., PH.D., D.D., LL.D., F.R.S.S. 1430, Cambridge Road, Ann Arbor, Michigan, U.S.A.
4-1-26	F	Fleming, ANDREW. Post Box No. 2436, Johannesburg, S. Africa.
5-1-31	R	Fooks, HERBERT A. 14, Ballygunge Park Road, Ballygunge, Calcutta.
5-11-13	R	Fox, CYRIL S., D.SC. BIRM., M.I.M.E., F.G.S. <i>Geological Survey of India</i> , 27, Chowringhee, Calcutta.
2-4-19	A	Friel, RALPH, I.C.S., B.A., B.SC. (DUBLIN), J.P., <i>Deputy Commissioner, Assam</i> . Silchar, Assam.
7-3-27	F	Fukushima, NAOSHIRO. 33, Hikawacho, Akasaka, Tokyo, Japan.
5-11-28	R	Galstaun, JOHN CARAPIET, O.B.E., <i>Merchant and Landholder</i> . 234/4, Lower Circular Road, Calcutta.
1-11-26	R	Galstaun, SHANAZAN, M.A., D.M.B.E., M.R.C.S., L.R.C.P., <i>Medical Practitioner, Radiologist, Medical College Hospital</i> . 39, Theatre Road, Calcutta.
6-10-09	R	*Gangoly, ORDHENDRA COOMAR, B.A., F.A.S.B. 12/1, Gangoly Lane, Calcutta.
5-11-34	R	Gee, EDWARD ROWLAND, M.A. (CANTAB.), F.G.S., <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
2-1-33	R	George, JAMES, B.A. (CANTAB.), I.C.S., <i>Special Officer, Political Department, Govt. of Bengal</i> . United Service Club, Calcutta.
4-1-26	R	Ghaffar, ABDUL, KHAN BAHADUR, <i>Additional Chief Presidency Magistrate</i> . 23, Gardner Lane, Entally, Calcutta.
6-2-33	L	Ghatak, JYOTISH CHANDRA, M.A. (TRIPLE), SAHITYA SARASWATI, JYOTISH-SAGARA, <i>Professor</i> . 4, Boloram Bose Ghat Road, Bhawanipore, Calcutta.
7-5-28	R	Ghosal, UPENDRA NATH, M.A., PH.D., <i>Professor of History, Presidency College</i> . 12, Badur Bagan Row, Calcutta.
5-4-26	R	Ghose, BIMAL CHANDRA, <i>Barrister-at-Law</i> . 27/1, Harish Mukherjee Road, Calcutta.
1-4-29	R	Ghose, DEB PROSONNO, <i>Zemindar</i> . 75, Beadon Street, Calcutta.
7-1-29	R	Ghose, THE HON'BLE MR. JUSTICE MOHIM CHANDRA, B.A. (CAL.), M.A. (CANTAB.), I.C.S., <i>Barrister-at-Law (Inner Temple), Judge, High Court</i> . 4A, Little Russell Street, Calcutta.
12-24	R	Ghose, SUSHIL CHANDRA, B.A., <i>Deputy Magistrate</i> . 1, Sikdarbagan Street, Calcutta.
2-4-24	R	Ghosh, K., D.T.M., D.P.H. (CANTAB.), L.M.S., <i>Medical Practitioner</i> . 45, Creek Row, Calcutta.

Date of Election.		
7-3-27	R	<b>Ghosh, PHANINDRA NATH, M.A., PH.D., SC.D. (PADUA), F.INST.P.,</b> <i>Sir Rashbehary Ghosh Professor of Applied Physics, University of Calcutta.</i> 92, Upper Circular Road, Calcutta.
4-9-12	R	<b>Ghosh, TARAPADA, Zemindar.</b> 14, Paddapukur Street, Kidderpore, Calcutta.
1-2-26	R	<b>Ghuznavi, A. H., M.L.A., Zemindar.</b> 18, Canal Street, Entally, Calcutta.
6-8-28	R	<b>Ghuznavi, ISKANDER S. K., Zemindar and Member, Advisory Board of Industries, Government of Bengal.</b> 45, Jhowtolla Road, Calcutta (and) Dilduar, Mymensingh.
1-2-26	R	<b>Ghuznavi, ALHADJ SIR ABDELKERIM ABU AHMED KHAN, KT., M.L.C., Zemindar of Dilduar.</b> 45, Jhowtolla Road, Calcutta (and) North House, Dilduar, Mymensingh.
3-12-34	R	<b>Gladstone, JOHN, Assistant, Messrs. Gillanders Arbuthnot &amp; Co., Ltd.</b> 8, Olive Street, Calcutta.
5-3-28	R	<b>Gooptu, DWIJENDRA NATH, Medical Practitioner and Landholder.</b> 5, Middleton Street, Calcutta.
7-9-10	N	<b>*Gravelly, FREDERIC HENRY, D.S.C., F.A.S.B.</b> Museum House, Egmore, Madras.
5-12-00	L	<b>Grieve, JAMES WYNDHAM ALLEYNE.</b> c/o Messrs. Coutts & Co., 440, Strand, London, W.C. 2.
4-2-25	A	<b>Guha, B. S., M.A., PH.D. (HARVARD).</b> Indian Museum, Calcutta.
6-12-26	R	<b>Guha, THE HON'BLE MR. JUSTICE SURENDRANATH, RAI BAHADUR, Judge, High Court.</b> 20, Lansdowne Road, Calcutta.
7-5-28	R	<b>Gupta, J. N., M.B.E., C.I.E., I.C.S., Late Member, Board of Revenue, Government of Bengal.</b> 5, Riverside, Barrackpore.
5-3-19	N	<b>Gupta, SIVAPRASAD.</b> Seva Upavana, Benares City.
5-8-15	R	<b>Gurner, CYRIL WALTER, B.A. (OXON), I.C.S., Chairman, Improvement Trust.</b> 4, Theatre Road, Calcutta.
6-3-01	N	<b>Habib-ur-RAHMAN, THE HON'BLE NAWAB SADR YAR JUNG, MAULANA, Rais, Bhikanpur.</b> Habibganj, District Aligarh.
5-2-34	R	<b>Haldar, BHARATI VIKAS, M.A., B.L., Advocate, High Court.</b> 47, Haldarpura Road, Kalighat, Calcutta.
6-1-30	R	<b>Haldar, SUDHINDRA KUMAR, M.A., I.C.S., Commissioner of Excise and Salt, Bengal.</b> 241, Lower Circular Road, Calcutta.
6-1-30	F	<b>Hamilton, SIR DANIEL MACKINNON, KT., Retired Partner, Messrs. Mackinnon Mackenzie &amp; Co.</b> Balmacara, Rosshire, Scotland.
2-4-24	R	<b>Haq, M. MAHFUZ-UL, M.A., Lecturer, Presidency College.</b> 8/B, Dargah Road, Park Circus, Calcutta.
1-5-12	R	<b>Harley, ALEXANDER HAMILTON, M.A., I.E.S., Principal, Islamia College.</b> 19, Wellesley Square, Calcutta.
1-2-26	F	<b>Harris, H. G., c/o Messrs. Martin &amp; Harris, Ltd., Rowlette Buildings.</b> 17, Prinsep Street, Calcutta.
2-4-28	R	<b>Harris, LAWRENCE ERNEST, Engineer, Manager for India, Messrs. Sulzer Brothers.</b> 4, Lyons Range, Calcutta.
5-11-19	N	<b>Hemraj, MANYABARA RAJ GURU, C.I.E., PANDITJI.</b> Dhokatole, Nepal.
3-2-30	F	<b>Henderson, ALEXANDER GAVIN, B.A. (OXON).</b> Buscot Park, Faringdon, Berks, England.
6-8-28	R	<b>Heron, A. M., D.S.C. (EDIN.), F.G.S., F.R.G.S., F.R.S.E., Superintendent, Geological Survey of India.</b> 27, Chowringhee, Calcutta.

Date of Election.		
6-11-33	F	<b>Hertz, Miss GERTA, PH.D., (KIEL UNIVERSITY).</b> c/o Firma Vorwerk, Tiefenbacher, Franahein, Fehlin; Dres.-Kaufmannshaus Bleichenbrücke, Hamburg.
7-6-11	L	<b>*Hidayat Hosain, MUHAMMAD, SHAMS 'UL-'ULAMA, KHAN</b> BAHADUR, PH.D., F.A.S.B. 96/2c, Collin Street, Calcutta.
1-2-26	A	<b>Hingston, H., Lt.-Col., I.M.S., M.D., Surgeon to H.E. the Governor of Bengal.</b> 5, Wellesley Place, Calcutta.
4-6-28	N	<b>Hobart, ROBERT CHARLES, I.C.S.</b> Commissioner's House, Gorakhpur, U.P.
1-4-25	R	<b>Hobbs, HENRY, Merchant.</b> 9, Old Court House Street, Calcutta.
1-2-32	R	<b>Holme, JAMES WILLIAM, M.A., I.E.S. (RETD.), Principal, La Martinière.</b> 11, Loudon Street, Calcutta.
7-3-27	N	<b>Hopkinson, ARTHUR JOHN, I.C.S., Secretary to the Government, N.-W.F. Province.</b> Peshawar, N.-W.F.P.
2-11-21	L	<b>*Hora, SUNDER LAL, D.SC., F.Z.S., F.R.S.E., F.A.S.B.</b> Zoological Survey of India, Indian Museum, Calcutta.
5-11-34	R	<b>Hosain, PRINCE AFSARUL MULUK MIRZA MUHAMMED AKRAM, BAHADUR, Political Pensioner and Landholder.</b> Afsar Manzil, 20, Ballygunge Circular Road, Calcutta.
6-6-23	L	<b>*Howard, SIR ALBERT, KT., C.I.E., M.A., F.A.S.B., Late Director, Institute of Plant Industry, Indore, and Late Agricultural Adviser to States in Central India.</b> British Science Guild, 6, John Street, Adelphi, London, W.C. 2.
4-1-26	R	<b>Hubert, OTTO, Chancellor to the German Consulate General.</b> 3, Lansdowne Road, Calcutta.
7-3-32	N	<b>Hughes, ARTHUR, B.A. (MANCHESTER), Indian Civil Service, Additional District Magistrate.</b> Dacca.
6-8-34	N	<b>Husain, SYED ATA, M.A. (CAL.), C.E. (ROORKEE), RETIRED Superintending Engineer, Hyderabad State.</b> Mohalla Lingumpally, Hyderabad, Deccan.
6-6-23	N	<b>*Hutton, J. H., C.I.E., I.C.S., M.A., D.SC., F.A.S.B., Chief Secretary to Government of Assam, Shillong.</b> Assam.
1-2-11	L	<b>Insch, JAMES.</b> 18, Beechwood Avenue, Boscombe, Hants, England.
5-12-23	R	<b>Jackson, P. S.</b> 4, Temple Chambers, 6, Old Post Office Street, Calcutta.
6-6-27	L	<b>Jain, BALDEODAS, Merchant and Banker.</b> 21, Armenian Street, Calcutta.
2-2-21	R	<b>Jain, CHEOTE LAL, M.R.A.S.</b> 25, Central Avenue North, Calcutta.
6-1-30	N	<b>Jain, NIRMAL KUMAR.</b> Devashrama, Arrah.
6-8-28	N	<b>Jaitly, P. L., Electrical Engineer, Merchant.</b> 15, Canning Road, Allahabad.
1-11-26	N	<b>Jameson, THOMAS BLANDFORD, MAJOR, M.C., M.A. (CAN-TAB.), I.C.S., District and Sessions Judge.</b> Hooghly.
4-11-29	F	<b>Jarvis, ROBERT Y.</b> The Department of State, Washington, District Columbia, U.S.A.
6-5-25	R	<b>Jatia, SIR ONKAR MULL, KT., O.B.E., Merchant.</b> 2, Rupchand Roy Street, Calcutta.
4-2-29	R	<b>Jenkins, WALTER ALLEN, D.SC. (SHEFFIELD), I.E.S.</b> Principal, David Hare Training College. United Service Club, Calcutta.
5-4-26	R	<b>Jones, THORNTON, Solicitor.</b> c/o Messrs. Morgan & Co., 1, Hastings Street, Calcutta.
2-4-24	R	<b>Judah, N. J., M.B., CH.B., F.R.C.S.</b> 43, Chowringhee, Calcutta.



Date of Election.		
1-11-11	L	<b>Kamaluddin AHMAD, SHAMS-UL-'ULAMĀ, M.A., I.E.S.,</b> <i>Principal, Krishnagar College. Krishnagar, Nadia.</i> *
5-3-24	R	<b>Kanjilal, M. N., M.A. (CAL.), LL.B. (CANTAB.), Barrister-at-Law.</b> 17, Loudon Street, Calcutta.
6-11-33	R	<b>Kavyatirtha, RAM DEAN, Pundit.</b> 55, Surendranath Banerjee Road, Calcutta.
4-5-10	L	<b>*Kemp, STANLEY W., B.A., D.SC., F.R.S., F.A.S.B.</b> 'Disco-very Expedition,' 52, Queen Anne Chambers, Dean Farrar Street, London, S.W. 1.
2-5-30	N	<b>Kenny, DIK EDWARD COURTENAY, LT.-COL., I.A., Deputy Commissioner, Tavoy.</b> Burma.
6-2-28	N	<b>Kewal, GANDA SINGH, PH.B.SC., I.O.G.E., F.R.G.S. (LONDON), F.T.S., F.I.A.S. (LONDON), Research Scholar in Sikh History.</b> Khalsa College, Amritsar.
1-2-26	R	<b>Khambata, R. B., M.R.C.S., L.R.C.P., D.P.H., Director of Public Health, Bengal.</b> 2-B, Camac Street, Calcutta.
2-12-29	N	<b>Khan, MATIUR RAHMAN, Khas Mahal Circle Officer.</b> 27, Panchbhaghata, Dacca
3-12-24	R	<b>Khan, REZAUR RAHMAN, M.A., B.L., Deputy President, Bengal Legislative Council.</b> 28, Convent Road, Entally, Calcutta.
6-5-25	R	<b>Khanna, VINAYEK LAL, M.B.A.S., Merchant.</b> 137F, Balaram Dey Street, Beadon Street P.O., Calcutta.
2-8-26	R	<b>Khettry, BENIMADHO, Proprietor, Messrs. Gouri Shanker Khettry, Landholders, Bankers and Merchants.</b> 15, Paggiya-patti, Barabazar, Calcutta.
2-11-25	F	<b>Kimura, R. (Ko-Shi), Principal, College Department of Rishso University.</b> Osaki Machi, Tokyo, Japan.
5-2-34	N	<b>Kirby, WALTER, B.Sc., Inspector of Mines in India.</b> Dhanbad, E.I.R.
7-7-20	R	<b>*Knowles, ROBERT, M.R.C.S., L.R.C.P., B.A. (CANTAB.), F.A.S.B., LT.-COL., I.M.S.</b> Lower Flat, 29, Theatre Road, Calcutta.
6-5-25	F	<b>Koester, DR. HANS, Legations Sekretar.</b> Auswaertiges Amt, Abteilung W., Berlin W. 8, Wilhelmstrasse 75.
3-2-30	R	<b>Korni, MICHAEL ALEXANDROWITZ (DR.), Architect and Engineer, Messrs. Bird &amp; Co</b> Chartered Bank Buildings, Clive Street, Calcutta.
1-3-26	R	<b>Kramrisch, STELLA (MRS.), PH.D., Lecturer in Ancient Indian History (Fine Arts), Calcutta University.</b> 57, Ballygunge Circular Road, Calcutta.
3-9-34	R	<b>Krishnan, K. S., D.Sc., Mahendralal Sircar Professor of Physics, Indian Association for the Cultivation of Science.</b> 210, Bowbazar Street, Calcutta.
6-11-33	R	<b>Krishnan, M. S., M.A. (MADRAS), PH.D. (LOND.), A.R.C.S., D.I.C. (LOND.), Assistant Superintendent, Geological Survey of India.</b> 27, Chowringhee, Calcutta.
2-4-28	R	<b>Kumar, KUMAR KRISHNA, M.A., B.L., Zemindar and Banker.</b> 31 & 31-1, Burtolla Street, Calcutta.
7-3-23	R	<b>Labey, GEORGE THOMAS, M.C., Bengal Pilot Service.</b> United Service Club, Calcutta.
1-4-25	N	<b>Laden La, SONAM WANGFEL, SARDAR BAHADUR, C.B.E., F.R.G.S., Hony. A.D.C. to H.E. the Governor of Bengal, Chief of Police, Lhasa, Tibet.</b> 'Yangang Villa', Darjeeling.
6-3-89	L	<b>*La Touche, THOMAS HENRY DIGGES, M.A., F.G.S., F.A.S.B.</b> 230, Hills Road, Cambridge, England.
5-2-34	R	<b>Law, BHABANI CHURN, Merchant, Zamindar and Artist.</b> 223, Cornwallis Street, Calcutta.

Date of Election.		
5-8-14	L	Law, BIMALA CHARAN, M.A., B.L., PH.D., F.R.HIST.S. 43, Kailas Bose Street, Calcutta.
1-2-11	R	Law, NARENDRA NATH, M.A., B.L., F.R.S., PH.D. 96, Amherst Street, Calcutta.
1-7-14	R	Law, SATYA CHURN, M.A., B.L., PH.D., F.Z.S., M.B.O.U. 50, Kailas Bose Street, Calcutta.
3-9-34	R	Ledrus, MICHAEL, <i>Professor in Divinity, Lecturer at the Gregorian University, Rome; Member of the Society of Jesus, Editor, 'The New Review'.</i> St. Xavier's College, 30, Park Street, Calcutta.
7-6-26	R	Lemmon, RICHARD DENNIS, <i>Merchant.</i> c/o Messrs. Martin & Harris Ltd., 17, Prinsep Street, Calcutta.
3-5-11	R	Lomax, C. E., M.A. Lu Martinière, 11, Loudon Street, Calcutta.
1-6-31	R	Lort-Williams, THE HON'BLE MR. JUSTICE JOHN, K.C., <i>Barrister-at-Law, Judge, High Court.</i> 227/1, Lower Circular Road, Calcutta.
4-3-29	R	Lunan, A. G., <i>Partner, Messrs. Bathgate &amp; Co.</i> 19, Old Court House Street, Calcutta.
5-7-26	A	Lyne, HOWARD WILLIAM, I.C.S. Khulna, E.B.R.
2-8-05	L	*McCay, DAVID, LT.-COL., I.M.S., M.D., B.OH., B.A.O., M.R.C.P., F.A.S.B. c/o The Standard Bank of S. Africa, Cradock, Cape Province, S. Africa.
1-3-26	A	McKay, JOHN WALLACE, <i>Delegate, Chilean Nitrate Committee (Indian Delegation).</i> 7, Hare Street, Calcutta.
11-1-93	L	*MacLagan, SIR EDWARD DOUGLAS, K.C.S.I., K.C.I.E., F.A.S.B. 39, Egerton Terrace London, S.W. 3.
5-3-24	R	McPherson, JAMES. c/o Messrs. Begg Dunlop & Co., Ltd., 2, Hare Street, Calcutta.
7-6-16	N	Mahajan, SURYA PRASAD. Murarpur, Gaya.
3-3-20	R	Mahalanobis, P. C., M.A., B.SC., I.E.S., <i>Professor, Presidency College.</i> 210, Cornwallis Street, Calcutta.
1-3-11	R	Mahtab, SIR BIJAY CHAND, K.C.S.I., I.O.M., MAHARAJA-DHIRAJA BAHADUR OF BURDWAN. 6, Alipur Lane, Calcutta.
3-2-30	N	Mahtab, UDAY CHAND, B.A., <i>Maharaj Kumar of Burdwan.</i> The Palace, Burdwan.
6-2-24	R	Mahindra, K. C., B.A. (CANTAB.). Messrs. Martin & Co., 12, Mission Row, Calcutta.
7-7-30	N	Mahudavala, JEHANGIR J., B.COM. (BIRMINGHAM), <i>Insurance Representative.</i> c/o J. C. Mahudavala, Esq., Fort, Broach, B.B. & C.I.Ry.
7-8-18	R	Maitra, JATINDRA NATH, <i>Physician and Surgeon.</i> 68/A, Beadon Street, Calcutta.
9-6-20	R	Majumdar, NANI GOPAL, M.A. Archaeological Survey of India, Indian Museum, Calcutta.
2-2-16	R	Majumdar, NARENDRA KUMAR, M.A., <i>Professor, Calcutta University.</i> 3, Government Place, West, Calcutta.
4-6-13	N	Majumdar, RAMESH CHANDRA, M.A., PH.D., <i>Professor, Dacca University.</i> Ramna, Dacca.
5-5-30	N	Mallam, G. L., CAPTAIN, I.A., <i>Census Superintendent.</i> Peshawar, N.-W.F.P.
7-5-28	R	Mallik, THE HON'BLE MR. JUSTICE SATYENDRA CHANDRA, M.A., I.C.S., <i>Judge, High Court.</i> 7-3, Burdwan Road, Alipur, Calcutta.
4-11-29	R	Mallia, BANTWAL GANAPATHY, MAJOR, I.M.S., F.R.C.S.E. Civil Surgeon, Howrah.

Date of Election.		
6-2-18	L	*Manen, JOHAN VAN, C.I.E., <i>Officier de l'Instruction Publique</i> , F.A.S.B. 6, Temple Chambers, 6, Old Post Office Street, Calcutta.
5-6-01	F	Mann, HAROLD HART, D.SC., M.SC., F.I.C., F.L.S. Woburn Experimental Station, Aspley Guise, Bedfordshire, England.
6-1-30	N	Martin, M. F. C., CAPT., R.E. c/o The Garrison Engineer, Mingladon, Burma.
5-5-30	R	Matthias, OWEN GARDINER, <i>Managing Director</i> , Messrs. Smith Stanistreet & Co., Ltd. Stanistreet House, 18, Convent Road, Entally, Calcutta.
2-1-28	N	Mello, FROILANO DE, COLONEL, <i>Director-General of Medical Services in Portuguese India</i> , <i>Professor of Parasitology</i> . Nova Gôa.
5-11-84	L	*Middlemiss, CHARLES STEWART, C.I.E., F.R.S., B.A., F.G.S., F.A.S.B. Aviemore, Crowborough, Sussex, England.
1-2-26	F	*Mills, JAMES PHILIP, I.C.S., M.A. (OXON), J.P., F.A.S.B., <i>Deputy Commissioner</i> , Assam. Conservative Club, St. James's, London, S.W.1.
5-6-12	N	Misra, CHAMPA RAM, B.A., Rai Bahadur, Pandit, <i>Diwan</i> , <i>Chhatarpur State</i> . Bundelkhand, C.I.
2-4-24	R	Mitra, J. C., M.A., B.L., <i>Retired Accountant-General</i> , Bengal. 1, Abinash Mitter Lane, Calcutta.
4-11-29	R	Mitra, MATHURA NATH, B.A., <i>Solicitor</i> . 12-1, Old Post Office Street, (160/1, Manicktolla Street) Calcutta.
5-3-24	R	Mitter, THE HON'BLE SIR B. L., K.C.S.I., M.A., B.L., <i>Barrister-at-Law</i> , <i>Member</i> , <i>Bengal Executive Council</i> . 5, Outram Street, Calcutta.
5-3-24	R	Mitter, THE HON'BLE MR. JUSTICE DWARKANATH, M.A., D.L., <i>Judge</i> , <i>High Court</i> . 12, Theatre Road, Calcutta.
4-3-29	R	Mitter, HIRANYA KUMAR, <i>Landholder</i> . 1, Jhamapukur Lane, Amherst Street P.O., Calcutta.
5-4-26	R	Mitter, KHAGENDRA NATH, RAI BAHADUR, M.A., <i>Professor</i> , <i>Presidency College (Retired)</i> . 72/1, Bondel Road, Ballygunge, Calcutta.
1-11-26	R	Modi, JAL R. K., B.A. 4, Camac Street, Calcutta.
5-3-34	R	Modi, JEHangIR JEEVANJI JAMSHEDJI, <i>Merchant</i> . 5, Dhurrumtollah Street, Calcutta.
6-8-24	N	Moloney, WILLIAM J., <i>General Manager of Reuter's for the East</i> . c/o 26/7, Dalhousie Square, Calcutta.
2-4-28	R	Mookerjee, BHABADEB, <i>Merchant</i> . 48, Barrackpore Trunk Road, P.O. Baranagore.
1-3-26	R	Mookerjee, ADITYA NATH, M.A., PH.D., <i>Late Principal</i> , <i>Sanskrit College</i> . 10/B, Mohun Lal Street, Shambazar, Calcutta.
5-11-24	R	Mookerjee, B. N., B.A. (CANTAB.), <i>Engineer</i> . 12, Mission Row, Calcutta.
3-5-98	L	Mookerjee, SIR RAJENDRA NATH, K.C.I.E., K.C.V.O., HON. F.A.S.B. 7, Harington Street, Calcutta.
2-7-24	R	Mookerjee, SYAMA PRASAD, M.A., B.L., <i>Vakil</i> , <i>High Court</i> , <i>Fellow of the University of Calcutta</i> . 77, Russa Road North, Calcutta.
5-6-33	A	Morris, C. J., <i>Captain</i> , <i>Indian Army</i> , 2/3rd Q.A.O. Gurkha Rifles. Razinak, Waziristan.
2-5-32	F	Muhammad, MIRZA, KHAN BAHADUR, C.I.E., LL.B., M.B.A.S., <i>Advocate</i> . Strand Road, Basrah.
2-2-21	R	Mukerjee, SUBODH CHANDRA, SHASTRI, M.A., <i>Docteur-es-Lettres</i> (Paris). 3/1A, Raja Rajabullav Street, Calcutta.

Date of Election.		
5-12-27	R	<b>Mukerjee, SUSIL KUMAR, F.R.C.S. (EDIN.), D.O. (OXON), D.O.M.S. (LOND.), Ophthalmic Surgeon, Carmichael Medical College Hospitals.</b> 1/1, Wood Street, Calcutta.
6-2-28	R	<b>Mukerji, THE HON'BLE MR. JUSTICE MANMATHA NATH, KT., M.A., B.L., Judge, High Court.</b> 8/1, Harsi Street, Calcutta.
5-3-24	R	<b>Mukerji, S., M.A., B.L., Vakil and Zemindar.</b> 7, Old Ballygunge Road, Calcutta.
3-3-30	N	<b>Mukharji, ISAN CHANDRA, Rai Bahadur, Tazimi Sardar and Retired Member of Jaipur Council.</b> Jaipur, Rajputana.
7-11-27	N	<b>Mukherjee, DEVAPROSANNA, M.A., B.L., Zemindar.</b> Burdwan.
2-8-26	R	<b>Mukherjee, JNANENDRA NATH, D.SC. (LONDON), F.C.S. (LONDON), Fellow of the Indian Chemical Society; Khaira Professor of Chemistry, University of Calcutta.</b> 92, Upper Circular Road, Calcutta.
5-7-26	R	<b>Mukhopadhyaya, PRABHAT KUMAR, M.A., Research Assistant, Calcutta University.</b> 27, Govinda Ghosal Lane, Bhawanipore, Calcutta.
2-2-21	R	<b>Mukhopadhyaya, RAMAPRASAD, M.A., B.L.</b> 77, Russa Road North, Bhawanipore, Calcutta.
2-4-28	R	<b>Mullick, KARTICK CHURN, KUMAR, Director, Raja D. N. Mullick &amp; Sons, Ltd</b> Colootola Rajbati, Chittaranjan Avenue, Calcutta
6-8-34	R	<b>Mullick, MANICK LAL, Landholder</b> 123, Grey Street, Calcutta.
4-3-29	R	<b>Mullick, PRAMATHA NATH, RAI BAHADUR, Zemindar and Landholder.</b> 129, Cornwallis Street, Calcutta.
7-5-28	N	<b>Murray, EUGENE FLORIAN OLIPHANT, A.I.M.M., F.G.S., Mining Geologist and Engineer.</b> Tatanagar, B.N.Ry.
1-6-21	N	<b>Muzammil-Ullah Khan, THE HON'BLE NAWAB SIR MOHD., KHAN BAHADUR, K.C.I.E., O.B.E., K.B., LL.D., Riss.</b> Bhikampur, Dt. Aligarh, U.P
7-3-06	N	<b>Nahar, PURAN CHAND, RAI BAHADUR, Solicitor.</b> c/o 48, Indian Mirror Street, Calcutta.
5-12-27	L	<b>Namgyal, H.H. MAHARAJA SIR TASHI, K.C.I.E., Maharaja of Sikkim</b> Gangtok, Sikkim.
6-6-27	N	<b>Nandi, MAHARAJA SIS CHANDRA, M.A., M.L.C., Zemindar.</b> Kasimbazar Rajbari, Kasimbazar, Murshidabad.
4-2-29	N	<b>Narain, HIRDE, M.A., B.T., Professor of History, Morris College.</b> Nagpur, C.P.
5-2-31	N	<b>Nariman, RUSTOM, K., M.I.O.E., A.C.H., F.R.G.S. (Retired Superintending Engineer, Punjab Irrigation), Professor of Engineering, Osmania University.</b> 'Gulistan', Sappers Lines, Secunderabad, Deccan.
5-3-28	R	<b>Neogi, PANCHANAN, M.A., PH.D., I.E.S., Professor of Chemistry, Presidency College.</b> 21, Kundu Lane, Belgachia, Calcutta.
3-11-30	R	<b>Newman, CARL DAMIEN, M.B.B.S., D.T.M. &amp; H., District Medical Officer, E.B.Ry</b> 2, Belvedere Park, Alipur, Calcutta.
3-12-24	N	<b>Newman, CHAS F., F.R.G.S., M.C.P.</b> Bhunga, Estate, Dt. Bahraich, Oudh, U.P.
7-4-15	F	<b>Ohtani, COUNT KOZUI.</b> San-ya-so, Edomachi, Fushimi, Kyoto, Japan.
5-11-28	R	<b>Olpadvala, E. S.</b> 52, Chowringheo, Calcutta.

Date of Election		
3-9-34	R	Ow-Wachendorf, BARON W., <i>German Consul General, Minister Plenipotentiary.</i> (German Consulate General, 3, Lansdowne Road Calcutta.
5-12-23	N	Pande, SHIVA BANDHAN, <i>Retired Tahsildar and Zemindar.</i> Ramaipatti, Mirzapur, U.P.
5-4-26	R	Parker, RICHARD HENRY, I.C.S., <i>Late Scholar of St. John's College, Oxford.</i> District and Sessions Judge, Alipore, Calcutta.
4-11-29	F	Parry, NEVILL EDWARD, I.C.S. (RETD.). 12, Howell Road, Exeter, England.
5-2-34	R	Pasricha, CHIRANJI LAL, M.A., M.B., B. CHIR. (CANTAB.), M.R.C.S. (ENG.), L.R.C.P. (LOND.), CAPTAIN, I.M.S., <i>Professor of Pathology, Bacteriology and Helminthology, School of Tropical Medicine and Hygiene.</i> 11, Rowland Road, Calcutta.
6-5-29	F	Pawsey, C. R., <i>Indian Civil Service.</i> c/o. The Lloyds Bank, 6, Pall Mall, London, S.W.1.
6-6-88	L	Pennell, AUBRAY PERCIVAL, B.A., <i>Barrister-at-Law.</i> Lamb's Building, Temple, London, E.C. 4.
5-2-34	N	Percival, FREDERICK GEORGE, PH.D. (LOND.), F.G.S., <i>General Superintendent, Ore Mines and Quarries, Tata Iron and Steel Co.</i> Jamshedpur.
1-4-25	R	Perier, FERDINAND, S.J., <i>Most Reverend the Archbishop of Calcutta.</i> 32, Park Street, Calcutta.
7-4-30	N	Pessein, REV. J. F., <i>Catholic Missionary, Superior of the Catholic Missionary Sanatorium.</i> Wellington, Nilgiris.
3-2-30	A	Pettigrew, REV. WILLIAM, <i>Missionary.</i> American Baptist Foreign Mission Society, P.O. Kangpokpi, Manipur, Assam.
6-4-31	N	Prasad, SHARDA. c/o Messrs. Gopinath Lal Behari, Satna.
3-4-18	L	*Prashad, BAINI, D.SC., F.Z.S., F.R.S.E., F.A.S.B., <i>Director, Zoological Survey of India.</i> Indian Museum, Calcutta.
3-8-25	N	Pruthi, HEM SINGH, M.SC. (PUNJAB), PH.D. (LONDON), <i>Imperial Entomologist, Imperial Institute of Agricultural Research.</i> Pusa, Darbhanga.
3-12-24	R	Pushong, E. S., M.D., L.S.A., <i>Medical Practitioner.</i> 1, Chapel Road, Hastings, Calcutta.
3-11-30	R	Rahman, SHAH KALIMUR, M.A., <i>Lecturer in Arabic and Persian, Calcutta University.</i> 51, Baitakhana Road, Calcutta.
6-2-28	N	Rai, LAKSHMI NARAIN, L.M.S., <i>Medical Officer.</i> In-charge, King Edward VII Hospital, Benares.
1-2-22	N	*Raman, SIR CHANDRASEKHARA VENKATA, KT., M.A., D.SC., F.R.S., F.A.S.B., <i>Director, Indian Institute of Science.</i> Bangalore.
1-11-26	N	Ramanujaswami, P. V., M.A., <i>Principal, Maharaja's Sanskrit College.</i> Vizianagram.
6-8-34	R	Rao, U. SHANKER, <i>Bengal Pilot Service.</i> 83, Chowringhee, Calcutta.
1-2-26	N	Rao, Y. RAMACHANDRA, RAO SAHIB, M.A., F.E.S., <i>Locust Research Entomologist.</i> McLeod Road, Karachi.
2-7-24	N	Ray, ABINASH CHANDRA, B.A. R.M.H.E. School, P.O. Baidyabati.
7-9-21	R	Ray, HEM CHANDRA, M.A., PH.D. (LONDON). P. 39A, Manicktollah Spur, Calcutta.

Date of Election.		
5-1-21	N	Ray, JAGADISNATH, MAHARAJA, <i>Maharaja of Dinajpore. Dinajpore.</i>
6-8-34	R	Ray, KARMOJOGIN, <i>Sahityaratna, Landholder, Government Contractor, Merchant and Agent; Proprietor, K. Ray &amp; Co., Landing Shipping Agency. 17A, Brindaban Paul Lane, P.O. Shambazar, Calcutta.</i>
5-3-90	R	*Ray, SIR PROFULLA CHANDRA, KT., C.I.E., D.SC., F.A.S.B. <i>University College of Science, 92, Upper Circular Road, Calcutta.</i>
5-11-28	L	Reinhart, WERNER, <i>Merchant c/o Messrs. Volkart Bros., Rychenberg, Winterthur, Switzerland.</i>
6-2-28	N	Reneman, NICO., Kian Gwan Co. (India), Ltd., <i>Church Gate House, Church Gate Street, Fort, Bombay.</i>
2-4-24	F	Richards, F. J., I.C.S. 6, <i>Lexham Gardens, London, W. 8.</i>
5-2-34	R	Richter, HERBERT, DR. JUR., <i>Vice-Consul for Germany. 3, Lansdowne Road, Calcutta.</i>
1-4-29	N	Rizvi, SYED HAMID HUSAIN, <i>Excise Sub-Inspector. Mohalla Sanechri, Near Musjid of Munshi Sk Ghassu, Saugor, C.P.</i>
3-12-24	L	Roerich, (GEORGE NICHOLAS, M.A., M.R.A.S., <i>Orientalist. 310, Riverside Drive, New York, U.S.A. ("Uruvati" Naggar, Kulu, Punjab)</i>
2-7-28	L	Roerich, NICHOLAS, <i>Professor, Honorary President, Master Institute of United Arts, New York, U.S.A., Artist-Painter 310, Riverside Drive, New York, U.S.A.</i>
3-12-24	N	Rogers, T. E., <i>Tea Planter. The Tyroom Tea Co., Ltd., Kharikatia, Assam.</i>
4-12-01	F	*Ross, SIR EDWARD DENISON, KT., C.I.E., PH.D., F.A.S.B., <i>Director, School of Oriental Studies. Finsbury Circus, London, E.C. 2</i>
5-6-33	R	Rossetti, FELIX FRANCIS LEO, <i>Secretary, Y.M.C.A. 42, Corporation Street, Calcutta.</i>
6-12-26	R	Roy, A K., <i>Barrister-at-Law, Advocate-General, Bengal. 3, Upper Wood Street, P.O. Theatre Road, Calcutta.</i>
1-12-30	N	Roy, KUMAR KAMALRANJAN, B.A., <i>Zemindar. Kashmir-bazar Post, Dt. Murshidabad.</i>
2-4-28	N	Roy, SUHRID KUMAR, B SC., PH.D., F.G.S., <i>Professor of Geology, Indian School of Mines. Dhanbad.</i>
6-8-24	N	Roy-Chowdhury, BRAJENDRA KISHORE, <i>Zemindar. (53, Sukea Street, Calcutta.) Gauripur, Mymensingh.</i>
7-5-28	N	*Saha, MEGH NAD, D SC., F.R.S., F.A.S.B., <i>Professor of Physics, University of Allahabad. Katra, Allahabad.</i>
5-11-24	N	*Sahni, B., M.A., SC.D. (CANTAB.), D.SC., F.G.S., F.A.S.B., <i>Professor of Botany The University, Lucknow.</i>
5-2-34	L	Sale, HAROLD MONTAGUE, M.A., F.G.S., <i>Geologist, Burmah Oil Co., Ltd. c/o Burmah Oil Co., Ltd., Digboi, Assam.</i>
3-12-24	R	Sarkar, C. K., C.E., <i>Engineer and Architect. 10, Hastings Street, Calcutta.</i>
3-3-09	R	Sarvadhikary, SIR DEVAPRASAD, KT., C.I.E., O.B.E., C.B.E., M.A., B.L., F.O.U., LL.D. (ABERDEEN), LL.D. (ST. ANDREWS), <i>Subiratra, VIDYARATNAKAR, JNANA-SINDHU. 20, Suri Lane, Entally, Calcutta.</i>
6-3-33	R	Seal, SATIS CHANDRA, M.A., B.L., <i>Honorary Secretary, Indian Research Institute. 55, Upper Chipore Road, Calcutta.</i>

Date of Election.		
5-2-34	R	<b>Selzam</b> , EDWART VON, <i>German Diplomatic Service, Acting Consul-General for Germany.</i> 18, Store Road, Ballygunge, Calcutta.
1-4-25	R	<b>Sen</b> , BENOY CHANDRA, M.A. 'Rupeswar', Diamond Harbour Road, Behala.
3 12-24	R	<b>Sen</b> , H. K., M.A., D.S.C. (LONDON). D.I.C., <i>Professor of Chemistry, University College of Science.</i> 92, Upper Circular Road, Calcutta.
5-12-23	L	<b>Sen</b> , LAKSHMAN, H.H. RAJA OF SUKET. Suket State, Punjab.
1-4-29	R	<b>Sen-Gupta</b> , NARES CHANDRA, M.A., D.L., <i>Advocate, High Court.</i> 36, Girish Mukherjee Road, Bhawanipore, Calcutta.
5-4-26	R	<b>Senior-White</b> , RONALD, F.R.S., F.R.S.T.M. & H., <i>Malaria-ologist.</i> 5, Godfrey Mansions, Garden Reach, Calcutta.
1-12-97	R	<b>Seth</b> , MESROB JACOB, M.R.A.S., M.S.A., F.R.S.A., <i>Examiner in Classical Armenian to the Calcutta University.</i> 9, Marsden Street, Upper Flat, Calcutta.
5-7-11	L	* <b>Sewell</b> , ROBERT BERESFORD SEYMOUR, C.I.E., M.A., SC.D. (CANTAB.), M.R.C.S., L.R.C.P., F.Z.S., F.L.S., F.R.S., F.A.S.B., LT.-COL., I.M.S., <i>Late Director, Zoological Survey of India.</i> 18, Barrow Road, Cambridge, England.
2-11-25	A	<b>Sharif</b> , MOHAMMAD, D.S.C., F.R.M.S., F.L.S., <i>Lecturer in Zoology.</i> Muslim University, Aligarh.
6-5-29	N	<b>Sharma</b> , SRI RAM, M.A., M.R.A.S., M.A.O.S., <i>Professor of History.</i> D.A.V. College, Lahore.
2-5-23	N	<b>Shebbeare</b> , E. O., <i>Conservator of Forests.</i> Darjeeling.
6-1-09	N	<b>Shirreff</b> , ALEXANDER GRIERSON, B.A., I.C.S. <i>Collector, Jaunpur.</i> U.P.
4-1-26	N	<b>Shortt</b> , H. E., LT.-COL., I.M.S., <i>Director, King's Institute, Guindy.</i> Madras.
5-1-31	N	<b>Shukla</b> , JAGANNATH PRASAD. Trans Gomti Outram Road, near Badshahnagar Railway Station, Lucknow.
6-2-28	L	<b>Shumser Jung Bahadur Rana</b> . SIR KAISER, K.B.E., SUPRADIPTA MANYAVARA, LIEUT.-GENERAL, <i>Nepalese Army.</i> Kaiser Mahal, Kathmandu, Nepal.
5-2-02	N	<b>Shyam Lal</b> , JALA, M.A., LL.B. Nawabganj, Cawnpore, U.P.
4-11-29	R	<b>Siddiqi</b> , MOHAMMAD ZUBAYR, M.A., PH.D., <i>Sir Asutosh Professor of Islamic Culture, Calcutta University.</i> P. 274, Bright Street, Park Circus, Calcutta.
5-3-13	L	* <b>Simonsen</b> , JOHN LIONEL, D.S.C., F.I.C., F.A.S.B. University College of North Wales, Bangor, North Wales.
6-2 18	N	<b>Singh</b> , MANYABARA BADA KAJI MARICHI MAN, PANDITJI, C.I.E. 38, Khichapokhari, Kathmandu, Nepal.
4-11-29	F	<b>Singh</b> , JAIPAL, M.A. ( <i>Modern Greats</i> ), <i>St. John's College, Oxford University.</i> Achimota College, Accra, West Africa.
5-3-34	L	<b>Singh</b> , HIS HIGHNESS THE HON'BLE MAHARAJADHIRAJA SIR KAMESWAR, K.C.I.E. Darbhanga.
2-1-33	N	<b>Singh</b> , RUDRA PERTAB, RAO BAHADUR, <i>Proprietor, Sonbarsa Raj.</i> Sonbarsa P.O., District Bhagalpore.
5-9-12	R	<b>Singhi</b> , BAHADUR SINGH. (Azimganj, Murshidabad.) 48, Gariahat Road, Calcutta.
7-8-33	N	<b>Sinh</b> , RAGHUBIR, RAJKUMAR, M.A., LL.B., <i>Heir-Apparent of Sitamau State.</i> Raghubir Niwas, Sitamau, C.I.
7-5-28	F	<b>Sinha</b> , LORD, OF RAIPUR. Queen Anne Mansions, St. James' Park, London.

Date of Election.		
6-6-27	N	Sinha, SHEONANDAN PRASAD, M.B., <i>Assistant Surgeon. Government Hospital, Jamshedpur.</i>
6-2-28	R	Sinha, SUHRID CHANDRA, KUMAR, M.SC. 18, Ananda Lane, P.O. Shambazar, Calcutta.
4-1-26	N	Sinton, J. A., O.B.E., LT.-COL., I.M.S., V.C., <i>Officer-in-Charge, Malaria Bureau. Central Research Institute, Kasauli.</i>
5-7-16	L	Sircar, (GANAPATI, VIDYARATNA. 69, Beliaghata Main Road, Calcutta.
5-3-24	N	Sircar, THE HON'BLE SIR NRIPENDRA NATH, KT., M.A., B.L., <i>Barrister-at-Law, Law Member, H.E. The Viceroy's Executive Council. New Delhi.</i>
5-3-24	R	Sircar, SIR NIL RATAN, KT., M.A., M.D., <i>Physician. 7, Short Street, Calcutta.</i>
7-11-32	N	Sitling, G. T. The Ong Press, Kalimpong, D.H. Ry.
1-3-26	R	Snaith, JOHN FRANK, <i>Managing Director, Messrs. Hamilton &amp; Co. 8, Old Court House Street, Calcutta.</i>
5-8-29	R	Sommerfeld, ALFRED, <i>Merchant. c/o Mousell &amp; Co., Mercantile Buildings, Lall Bazar, Calcutta</i>
3 9-34	R	Sondhi, VED PALL, M.SC., F.G.S., <i>Assistant Superintendent, Geological Survey of India. 27, Chowringhee, Calcutta.</i>
7-3-27	R	Stagg, M., LT.-COL., R.E., O.B.E., <i>Master, H.M.'s Mint. 47, Strand Road, Calcutta.</i>
7-3-23	F	Stamp, L. DUDLEY, B.A., D.SC. University of London, London School of Economics, Houghton Street, London, W.C. 2.
4-1 26	N	Stapleton, GRACE (MISS), M.D., B.S. (LONDON). <i>Government Caste and Goshu Hospital, Triplicane, Madras.</i>
28-9-04	L	*Stapleton, HENRY ERNEST, M.A., B.SC., I.E.S., F.A.S.B., <i>Late Director of Public Instruction, Bengal. St. Brelade, Jersey, C.I, England.</i>
5-11-28	N	Statham, R. M., C.I.E., B.A., I.E.S., <i>Educational Commissioner with the Government of India. New Delhi.</i>
6-5-25	R	Staub, MAX, <i>Consul for Switzerland. 100, Clive Street, Calcutta.</i>
1-11-22	R	Strickland-Anderson (Mrs.). 1, Alipur Park, Calcutta.
2-6-20	R	Suhrawardy, SIR HASSAN, O.B.E., LT.-COL., KT., M.D., F.R.C.S.I., D.P.H., <i>Chief Medical Officer, E.B. Ry., late Vice-Chancellor, Calcutta University. 3, Suhrawardy Avenue, Park Circus, Calcutta.</i>
3-3-20	N	Sundararaj, BUNGURU, M.A., PH.D., <i>Director of Fisheries. Chepauk, Madras.</i>
7-11-32	L	Suvarna, SHUMSER JUNG BAHADUR RANA, <i>Major-General in the Nepalese Army. Singha Darbar, Kathmandu, Nepal.</i>
6-4-98	R	Tagore, SIR PRADYOT COOMAR, KT., MAHARAJA BAHADUR. "Tagore Castle", 12, Prasanna Coomar Tagore Street, Calcutta.
7-11-27	R	Tarkatirtha, BIMALANANDA, Kaviraj, <i>Punditbhusan, Byakaranatirtha. 90/3, Grey Street, Calcutta.</i>
31-8-93	L	Tate, GEORGE PASSMAN. 56, Cantonment, Bareilly, U.P.
2-5-32	R	Thakur, AMARESWAR, M.A., PH.D., <i>Lecturer, Calcutta University, Hon. Secretary, Sanskrit Publication Department, Metropolitan Printing and Publishing House. 56, Dhurumtollah Street, Calcutta.</i>
2-12-29	R	Thomas, H. W., F.C.S., M.P.S., <i>Senior Partner and Chairman of the Managing Directors, Messrs Smith Stanistreet &amp; Co. Stanistreet House, 18, Convent Road, Entally, Calcutta.</i>



Date of Election.		
1-6-04	L	*Tipper, GEORGE HOWLETT, M.A., F.G.S., M.INST.M.M., F.A.S.B. "The Laurels", Glebe Road, Cambridge, England.
4-3-29	A	Travers, SIR WALTER LANCELOT, KT., C.I.E., O.B.E., M.L.C., Tea Planter, Baradighi Tea Estate. Baradighi P.O., B.D.R., Jalpaiguri
7-5-28	F	Tucci, GUISEPPE, PH.D., Late Professor of Religions and Philosophy of India and the Far East, University of Rome ; Professor of Chinese, University of Naples. Naples, Italy.
5-7-26	A	Tyson, JOHN DAWSON, O.B.E., M.A. (OXON), I.C.S., J.P., Private Secretary to H.E. the Governor of Bengal. Government House, Calcutta.
3-9-34	R	Ulser, M. E. M. M., Consul General for Belgium. 9, Pretoria Street, Calcutta.
6-8-28	N	Urchs, OSWALD, M.D c/o Messrs Havero Trading Co., Ltd., Post Box 642, Bombay.
7-3-27	R	Urquhart, REV. W. S., M.A., D.D., D.LITT., Principal, Scottish Church College, and Late Vice-Chancellor, Calcutta University. 3 & 4, Cornwallis Square, Calcutta
4-7-27	N	Vance, R. L., M.B., B.O.H., B.A.O. (DUB.), L.M. (ROT.), MAJOR, I.M.S., Officiating Chief Medical Officer, Western India States Agency. Rajkot, Kathiawar.
5-2-34	R	Vasu, VISVA NATH. 8, Visvakosh Lane, Baghbazar, Calcutta.
7 8-33	R	Vedantatirtha, VANAMALI, M.A., Formerly Professor, Cotton College, Gauhati. 8/4-E, Nepal Bhattacharya Lane, Kalighat, Calcutta.
6-6-32	R	Vere-Hodge, MRS. E. H., Author. 9/4, Middleton Row, Calcutta.
5-7-05	R	Vidyabhusana, AMULYA CHARAN 34, Rainnatan Bose Lane, Shambazar, Calcutta.
1-2-32	R	Visser, DR. PH. C., Consul-General for the Netherlands. E-1, Clive Buildings, Clive Street, Calcutta.
6-3-01	L	*Vogel, JEAN PHILIPPE, LITT.D., F.A.S.B. Noordeindsplein, 4a, Lieden, Holland.
27-9-94	L	Vost, WILLIAM, LT.-COL., I.M.S. Leicester Lodge, 1, Medina Villas, Hove, Sussex, England.
6-5-25	R	*Wadia, D. N., M.A., B.SC., F.R.G.S., F.G.S., F.A.S.B., Geological Survey of India. 27, Chowringhee, Calcutta.
5-3-28	N	Waight, HARRY GEORGE, B.A. (OXON. and LOND.), F.R.G.S., I.C.S., District and Sessions Judge. Burdwan.
2-5-27	A	Watson, SIR ALFRED HENRY, KT., Late Editor, The "Statesman", Calcutta. England.
2-2-31	A	Wauchope, R. S., O.B.E., A.I.C.F., F.R.A.I., MAJOR, I.A. 8, Park Chambers, 93, Park Street, Calcutta.
6-2-33	N	Wellsted, THOMAS ARTHUR, A.R.S.M., B.SC., ASSOC. INST. M.M., Mining Engineer. Mansar, P.O. Kandri, Ramtek, C.P.
6-2-33	R	West, WILLIAM DIXON, M.A. (CANTAB.), Assistant Superintendent, Geological Survey of India. 27, Chowringhee, Calcutta.
1-11-26	R	Westcott, FOSS, MOST REVEREND, D.D. (CANTAB.), HONORARY D.D. (OXON), Bishop of Calcutta and Metropolitan of India, Burma and Ceylon. Bishop's House, 51, Chowringhee, Calcutta.

Date of Election.		
3-12-34	R	Weston, ARTHUR TOM, M.SC. (VICT.), M.INST.C.E., M.I.E. (IND.), <i>Director of Industries, Bengal.</i> United Service Club, Calcutta.
19-9-06	L	*Whitehead, RICHARD BERTRAM, F.A.S.B., I.C.S. (RETD.). 30, Millington Road, Cambridge, England.
6-5-29	A	Williams, HENRY FRENCH FULFORD, M.A., CLARE COLLEGE (CAMB.), <i>Chaplain of Barrackpore.</i> Barrackpore.
6-2-28	F	Williams, T. TALIESIN, M.A., B.SC. 2, Orchard, Welwyn Garden City, Herts., England.
5-2-34	N	Williamson, FREDERICK, I.C.S., <i>Political Officer in Sikkim.</i> Gangtok, Sikkim.
3-2-34	R	Wilson, HARRY ELLIS CHASLER, M.B., CH.B., D.S., <i>Professor of Biochemistry and Nutrition, All-India Institute of Hygiene and Public Health.</i> U.S. Club, Calcutta.
7 3-06	L	*Woolner, ALFRED COOPER, C.I.E., M.A., D.LITT. (Hon.), F.A.S.B., <i>Vice Chancellor, Punjab University.</i> 53, Lawrence Road, Lahore.
1-4-08	R	Wordsworth, WILLIAM CHRISTOPHER, M.A., I.E.S. (RETD.). c/o The "Statesman", Chowringhee Square, Calcutta.
7-3 27	N	Wright, FREDERIC MAITLAND, <i>Broker.</i> Post Box No. 72, Bombay.
5-2-19	N	*Yazdani, GHULAM, M.A., F.A.S.B., <i>Epigraphist to the Government of India for Persian and Arabic Inscriptions, Hyderabad.</i> Archæological Survey, Hyderabad, Deccan.

# ORDINARY MEMBERS.

(Chronological.)

1884.				1905.			
Nov.	5.	Middlemiss, C. S.		July	5.	Vidyabhusana, A. C.	
1887.				Aug.	2.	McCay, D.	
Aug.	25.	Criper, W. R.		1906.			
1888.				Jan.	3.	Chapman, J. A.	30
June	6.	Pennell, A. P.		Mar.	7.	Nahar, P. C.	
1889.				"	"	Woolner, A. C.	
Mar.	6.	La Touche, T. H. D.		Sept.	19.	Whitehead, R. B.	
1890.				Oct.	31.	Finlow, R. S.	
5 Mar.	5.	Ray, Sir Prafulla C.		1907.			
				July	3.	Brown, J. C.	35
				"	"	Christie, W. A. K.	
1892.				1908.			
Jan.	11.	MacLagan, Sir Edward D.		Jan.	1.	Brahmachari, Sir U. N.	
Feb.	1.	Bodding, P. O.		April	1.	Wordsworth, W. C.	
1893.				Nov.	4.	Bhattacharji, B.	
Aug.	31.	Tate, G. Passman		1909.			
1894.				Jan.	6.	Shirreff, A. G.	40
Sept.	27.	Vost, W.		Mar.	3.	Chakravarti, N.	
1895.				"	"	Sarvadhikary, Sir D. P.	
10 Mar.	6.	Bose, Sir Jagadis C.		April	7.	Bentley, C. A.	
July	3.	Beatson-Bell, Sir Nicholas D.		July	7.	Bazaz, R. K.	
Sept.	19.	De, K. C.		Oct.	6.	Brown, P.	45
1896.				"	"	Bruhl, P.	
Jan.	8.	Burn, Sir Richard		"	"	Gangoli, O. C.	
1897.				Nov.	3.	Christophers, Sir S. R.	
Dec.	1.	Seth, M. J.		1910.			
1898.				May	4.	Dhavle, S. B.	
15 Jan.	5.	Dods, W. K.		"	"	Kemp, S. W.	50
April	6.	Tagore, Sir Pradyot C.		Sept.	7.	Gravelly, F. H.	
May	4.	Mookerjee, Sir R. N.					
1900.				1911.			
Dec.	5.	Grieve, J. W. A.		Feb.	1.	Insch, J.	
				"	"	Law, N. N.	
1901.				Mar.	1.	Mahtab, Sir Bijay Chand	
Mar.	6.	Habib-ur-Rahman.		May	3.	Lomax, C. E.	55
20 "	"	Vogel, J. I.		June	7.	Chatterjee, K. K.	
June	5.	Mann, H. H.		"	"	Hosain, M. H.	
Dec.	4.	Ross, Sir Edward D.		July	5.	Sewell, R. B. S.	
1902.				Nov.	1.	Ahmed, K.	
Feb.	5.	Shyam Lal.					
July	2.	Doxey, F.		1912.			
1904.				May	1.	Harley, A. H.	60
25 June	1.	Tipper, G. H.		June	5.	Misra, C.	
Aug.	3.	Fermor, L. L.		July	3.	Andrews, E. A.	
"	"	Stapleton, H. E.		Sept.	4.	Ghosh, T.	
				"	"	Singhi, B. S.	

# Chronological List of Ordinary Members.

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1913.			
65	Mar.	5.	Simonsen, J. L.
	April	2.	Calder, C. C.
	June	4.	Majumdar, R. C.
	Nov.	5.	Fox, C. S.
1914.			
	Mar.	4.	Bacot, J.
70	April	1.	Chaudhuri, G. D.
	July	1.	Law, S. C.
	Aug.	5.	Law, B. C.
1915.			
	April	7.	Ohtani, Count K.
	Aug.	4.	Gurner, C. W.
75	Sept.	1.	Cleghorn, M. L. W.
	Oct.	27.	Chatterjee, Sir A. C.
1916.			
	Feb.	2.	Majumdar, N. K.
	June	7.	Mahajan, S. P.
	July	5.	Sarkur, G.
1917.			
80	April	4.	Awati, P. R.
	"	"	Aiyangar, K. V. R.
	Aug.	1.	Bhandarkar, D. R.
1918.			
	Feb.	6.	Banerji, N. N.
	"	"	Manen, Johan van
85	"	"	Singh, B. M.
	April	3.	Prashad, B.
	Aug.	7.	Maitra, J. N.
1919.			
	Feb.	5.	Yazdani, G.
	Mar.	5.	Gupta, S. P.
90	April	2.	Friel, R.
	Nov.	5.	Hemraj, R.
1920.			
	Mar.	3.	Mahalanobis, P. C.
	"	"	Sundara Raj, B.
	June	2.	Suhrawardy, Sir H
95	"	"	Majumdar, N. G.
	July	7.	Knowles, R.
	Aug.	4.	Dikshit, K. N.
	Sept.	1.	Chakladar, H. C.
	"	"	Chanda, R. P.
100	"	"	Chatterjee, N. C.
	Dec.	"	Akbar Khan, Sir M.
1921.			
	Jan.	5.	Ray, J. N.
	Feb.	2.	Jain, Chhote Lal
105	"	2.	Mukerjee, R. P.
	"	"	Mookerjee, S. C.
	Mar.	2.	Acton, H. W.
	"	"	Agharkar, S. P.

June	1.	Muzamilullah Khan, Sir Mohammad	
Sept.	7.	Ray, H. C.	
Nov.	2.	Hora, S. L.	110
1922.			
Feb.	1.	Bhattacharya, V. S.	
"	"	Chopra, R. N.	
"	"	Raman, Sir C. V.	
April	5.	Abdul Ali, A. F. M.	
June	5.	Bhattacharya, S. P.	115
Sept.	6.	Das-Gupta, S. N.	
Nov.	1.	Strickland-Anderson, Mrs.	
1923			
Mar.	7.	Lahey, G. T.	
"	"	Stamp, L. D.	
May	2.	Shebbeare, E. O.	120
June	6.	Howard, Sir A.	
"	"	Hutton, J. H.	
Aug.	1.	Biswas, K. P.	
Dec.	5.	Chopra, B. N.	
"	"	Barwell, N. F.	125
"	"	Jackson, P. S.	
"	"	Sen, H. H. Lakshman	
"	"	Pande, S. B.	
1924			
Feb.	6.	Mahundra, K. C.	
Mar.	5.	Banerjee, P. N.	130
"	"	Kanjilal M. N.	
"	"	Mukerji, S.	
"	"	Mitter, Sir B. L.	
"	"	Mitter, D. N.	
"	"	McPherson, J.	135
"	"	Sircar, Sir N. N.	
"	"	Sircar, Sir N. R.	
April	2.	Bahl, K. N.	
"	"	Ghose, K.	
"	"	Judah, N. J.	140
"	"	Richards, F. J.	
"	"	Haq, M. M.	
"	"	Mitra, J. C.	
May	7.	Bhattacharya, B.	
July	2.	Ray, A. C.	145
"	"	Mookerjee, S. P.	
Aug.	6.	Chatterji, S. K.	
"	"	Moloney, W. J.	
"	"	Roy-Chowdhury, B. K.	
"	"	Davies, L. M.	150
Nov.	5.	Chattopadhyay, K. P.	
"	"	Sahni, B.	
"	"	Mookerji, B. N.	
Dec.	3.	Das, S. N.	
"	"	Newman, Chas. F.	155
"	"	Pushong, E. S.	
"	"	Rogers, T. E.	
"	"	Basu, J. N.	
"	"	Ghose, S. C.	

160	Dec. 3.	Sarkar, C. K.	Aug. 2.	Mukherjee, J. N.	215
	" "	Roerich, G. N.	" "	Khettry, B.	
	" "	Sen, H. K.	Nov. 1.	Jameson, T. B.	
	" "	Khan, R. R.	" "	Modi, J. R. K.	
			" "	Westcott, F.	
	1925.		" "	Barhut, T. K.	220
	Feb. 4.	Guha, B. S.	" "	Ramanujaswami, P. V.	
165	Mar. 4.	Benthall, Sir E. C.	" "	Mills, J. P.	
	" "	Das, A. N.	" "	Galstaun, S.	
	" "	Deb, Kshitindra	" "	Chokhani, S.	
	April 1.	Perier, F.	" "	Bagchi, P. C.	225
	" "	Hobbs, H.	Dec. 6.	Aiyangar, S. K.	
170	" "	Laden La, S. W.	" "	Guha, S. N.	
	" "	Sen, B. C.	" "	Roy, A. K.	
	May 6.	Jatia, Sir O. M.			
	" "	Khanna, V. L.	1927.		
	" "	Koester, Hans	Jan. 3.	Chakravarty, N.	
175	" "	Staub, Max.	" "	Bivar, H. G. S.	230
	" "	Wadia, D. N.	Feb. 7.	Chatterjee, A.	
	June 3.	Datta, S. K.	" "	Captain, D. M.	
	July 6	Bose, M. M.	Mar. 7.	Hopkinson, A. J.	
	Aug. 3.	Coyajee, Sir J. C.	" "	Urquhart, W. S.	
180	" "	Pruthi, H. S.	" "	Bake, A. A.	235
	Nov. 2.	Acharya, P.	" "	Stagg, M.	
	" "	Chattopadhyāya, K. C.	" "	Ghosh, P. N.	
	" "	Crookshank, H.	" "	Abdul Kadir, A. F. M.	
	" "	Kimura, R.	" "	Fukushima, N.	
185	" "	Sharif, M.	" "	Wright, F. M.	240
			April 4.	Dewick, E. C.	
	1926.		May 2.	Watson, Sir A. H.	
	Jan. 4.	Fleming, Andrew	June 6.	Nandi, Maharaja S. C.	
	" "	Ghaffar, Abdul	" "	Jain, R.	
	" "	Hubert, Otto	" "	Sinha, S. P.	245
	" "	Shortt, H. E.	July 4.	Chatterjee, P. P.	
190	" "	Sinton, J. A.	" "	Chakravarti, C.	
	" "	Stapleton, G. (Miss)	" "	Vance, R. L.	
	Feb. 1.	Rao, Y. R.	Nov. 7.	Tarkatirtha, B.	
	" "	Ghuznavi, Sir A. K.	" "	Mukherji, D.	250
	" "	Hingston, H.	" "	Brahmachary, S. C.	
195	" "	Harris, H. G.	Dec. 5.	Namgyal, H.H. Sir Tashi	
	" "	Ghuznavi, A. H.	" "	Dechhen, H.H. Kun-zang	
	" "	Khambata, R. B.	" "	Chowdhury, Sir C.	
	Mar. 1.	McKay, J. W.	" "	Mukerjee, S. K.	255
	" "	Snaith, J. F.			
200	" "	Mukherjee, A. N.	1928.		
	" "	Datta, H. N.	Jan. 2.	Basu, N. M.	
	" "	Basu, N. K.	" "	Mello, F. de	
	" "	Kramrisch, Stella	Feb. 6.	Sinha, S. C.	
	" "	Bagnall, J. F.	" "	Kewal, G. S.	
205	April 5.	Senior-White, R.	" "	Ezra, Sir D.	260
	" "	Ghose, B. C.	" "	Roneman, Nico	
	" "	Parker, R. H.	" "	Mukerji, Sir M. N.	
	" "	Bhatia, M. L.	" "	Rai, L. N.	
	" "	Mitter, K. N.	" "	Williams, T. T.	
210	" "	Jonos, T.	" "	Shumsher, Sir Kaiser	265
	June 7.	Lemmon, R. D.	Mar. 5.	Waigt, H. G.	
	July 5.	Mukhopadhyaya, P. K.	" "	Goopu, D. N.	
	" "	Tyson, J. D.	" "	Neogi, P.	
	" "	Lyne, H. W.			

	Mar.	5.	Biswas, C. C.	Nov.	4.	Jarvis, R. Y.	
270	"	"	Eberl, Otto	"	"	Edwards, L. B.	
	April	2.	Roy, S. K.	"	"	Siddiqi, M. Z.	
	"	"	Mullick, K. C.	"	"	Mallya, B. G.	330
	"	"	Bhattacharyya, N. C.	Dec.	2.	Fisher, F. B.	
	"	"	Kumar, K. K.	"	"	Khan, M. R.	
275	"	"	Chowdhury, Rai J. N.	"	"	Fawcus, L. R.	
	"	"	Harris, L. E.	"	"	Thomas, H. W.	
	"	"	Mookerjee, B.				
	May	7.	Chatterji, K. N.				
	"	"	Chatterjee, Sir N. R.	1930.			
280	"	"	Tucci, G.	Jan.	6.	Jain, N. K.	335
	"	"	Murray, E. F. O.	"	"	Haldar, S. K.	
	"	"	Gupta, J. N.	"	"	Bassewitz, Count	
	"	"	Basu, N.	"	"	Hamilton, Sir D. M.	
	"	"	Ghosal, U. N.	"	"	Martin, M. F. C.	
285	"	"	Mallik, S. C.	"	"	Chakravarti, S. C.	340
	"	"	Lord Sinha of Raipur	Feb.	3.	Henderson, A. G.	
	"	"	Saha, M. N.	"	"	Mahtab, U. C.	
	June	4.	Bhadra, S. N.	"	"	Korni, M. A.	
	"	"	Hobart, R. C.	"	"	Pettigrew, W.	
290	"	"	Bhattachali, N. K.	"	"	Chakravarti, M. N.	345
	July	2.	Roorich, N.	Mar.	3.	Mukharji, I. C.	
	"	"	Das, P. K.	"	"	Ashton, H. S.	
	Aug.	6.	Jaitly, P. L.	April	7.	Pessein, J. F.	
	"	"	Urchs, O.	"	"	Ahmad, S. K.	
295	"	"	Ghuznavi, I. S. K.	May	5.	Deo, Sir P. C. Bhanj	350
	"	"	Heron, A. M.	"	"	Matthias, O. G.	
	Nov	5.	Olpadvala, E. S.	"	"	Mallam, G. L.	
	"	"	Bose Mullick, G. N.	"	"	Cooper, G. A. P.	
	"	"	Chopra, G.	June	2.	Kenny, D. E. C.	
300	"	"	Statham, R. M.	July	7.	Mahudavala, J. J.	355
	"	"	Reinhart, W.	Nov.	3.	Austin, G. J.	
	"	"	Galstaun, J. C.	"	"	Rahman, S. K.	
				Nov.	3.	Newman, C. D.	
				Dec.	1.	Roy, K. K.	
1929.							
	Jan.	7.	Basu, S. C.				
	"	"	Ghose, M. C.	1931.			
305	Feb.	4.	Narain, Hirde	Jan.	5.	Fooks, H. A.	360
	"	"	Jenkins, W. A.	"	"	Shukla, J. P.	
	Mar.	4.	Travers, Sir W. L.	"	"	Chatterji, D.	
	"	"	Mitter, H. K.	"	"	Evans, P.	
	"	"	De, J. C.	Feb.	2.	Wauchope, R. S.	
310	"	"	Basu, B. K.	"	"	Douglas, G. W.	365
	"	"	Lunan, A. G.	"	"	Clough, J.	
	"	"	Mullick, P. N.	Mar.	2.	Bose, S. K.	
	April	1.	Ghose, D. P.	April	6.	Bhose, J. C.	
	"	"	Rizvi, S. H. H.	"	"	Prasad, S.	
315	"	"	Sen-Gupta, N. C.	May	4.	Bottomley, J. M.	370
	May	6.	Sharma, S. R.	June	1.	Lort-Williams, J.	
	"	"	Williams, H. F. F.	Aug.	3.	Barua, K. L.	
	"	"	Pawsey, C. R.	Dec.	7.	Eliade, M.	
	July	1.	Dunn, J. A.				
320	Aug.	5.	Sommerfeld, A.	1932.			
	Nov.	4.	Berthoud, G. F.	Feb.	1.	Holme, J. W.	
	"	"	Singh, J.	"	"	Visser, Ph. C.	375
	"	"	Mitra, M. N.	"	"	Clendenin, D. L.	
	"	"	Cotter, G. de P.	Mar.	7.	Hughes, A.	
325	"	"	Campbell, G. R.	"	"	Chakraborty, K. B.	
	"	"	Parry, N. E.	"	"	Darbari, M. D.	

380	May 2.	Thakur, A.	Feb. 5.	Kirby, W.	410
	" "	Muhammad, M.	" "	Law, B. C.	
	June 6.	Vere-Hodge, Mrs. E. H.	" "	Nariman, R. K.	
	Nov. 7.	Suvarna Shumser	" "	Pasricha, C. L.	
	" "	Driver, D. C.	" "	Percival, F. G.	
385	" "	Sitling, G. T.	" "	Richter, H.	415
	Dec. 5.	Dutt, N.	" "	Sale, H. M.	
	" "	Boyle, C. A.	" "	Selzam, E. von	
	" "	Del, S. K.	" "	Vasu, V. N.	
			" "	Williamson, F.	
	1933.		Mar. 5	Craddock, Sir W. M.	420
	Jan. 2.	George, J.	" "	Modi, J. J. J.	
390	" "	Dutch, R. A.	" "	Singh, H. H. Sir K.	
	" "	Singh, R. P.	May 7	Bent, W. A.	
	Feb. 6.	Wellsted, T. A.	" "	Duncan, P. C.	
	" "	Ghatak, J. C.	Jun. 4	Chatterji, B. R.	425
	" "	West, W. D.	" "	Daver, N. S.	
395	Mar. 6.	Seal, S. C.	Aug. 6	Husain, S. A.	
	June 5.	Morris, C. J.	" "	Mullick, M. L.	
	" "	Chakravarti, S. K.	" "	Rao, U. S.	
	" "	Rossetti, F. F. L.	" "	Ray, K.	430
	July 3.	Dutt, G. S.	Sep. 3	Anden, J. B.	
400	Aug. 7.	Sinh, Raghubir	" "	Krishnan, K. S.	
	" "	Vedantatirtha, V.	" "	Ledrus, M.	
	Nov. 6.	Kavyatirtha, R. D.	" "	Ow - Wachendorf,	
	" "	Krishnan, M. S.	" "	Baron W.	
	" "	Coulson, A. L.	" "	Sondhi, V. P.	435
405	" "	Hertz, Miss Gerta	" "	Ulser, M. E. M. M.	
			Nov. 5	Gee, E. R.	
			" "	Hosain, Princee	
	1934.		" "	A. M. M. M. A.	
	Jan. 1.	Ahmad, M. J.	Dec. 3	Burt, B. C.	
	Feb. 5.	Bates, W. H.	" "	Gladstone, J.	440
	" "	Bhuyan, S. K.	" "	Weston, A. T.	
	" "	Halder, B. V.	" "	Wilson, H. E. C.	

# LIFE MEMBERS.

(Chronological.)

	5-11-84	C. S. Middlemiss (30 N.).	5- 7-11	R. B. S. Sewell (28 N.).	
	6- 6-88	A. P. Pennell (88 F.).	1-11-11	Kamaluddin Ahmad (24 N.).	30
	6- 3-89	T. H. D. La Touche (10 N.).	5- 3-13	J. L. Simonsen (19 N.).	
	11- 1-93	Sir Edward D. MacLagan (94 R.).	4- 3-14	J. Bacot (14 F.).	
5	1- 2-93	P. O. Bodding (14 N.).	5- 8-14	B. C. Law (33 R.).	
	31- 7-93	G. P. Tate (23 N.).	5- 7-16	G. Sircar (29 N.).	
	27- 9-94	W. Vost (94 F.).	6- 2-18	Johan van Manen (25 R.).	35
	3- 7-95	Sir Nicholas D. Beatson-Bell (95 N.).	3- 4-18	B. Prashad (29 R.).	
	19- 9-95	K. C. De (26 R.).	2-11-21	S. L. Hora (30 N.).	
10	3- 5-98	Sir R. N. Mookerjee (29 R.).	6- 6-23	A. Howard (30 N.).	
	5-12-00	J. W. A. Grieve (00 F.).	5-12-23	H.H. Lakshman Sen (24 N.).	
	6- 2-01	J. Ph. Vogel (25 F.).	7- 5-24	B. Bhattacharya (24 N.).	40
	2- 7-02	F. Doxey (28 R.).	6- 8-24	L. M. Davies (24 N.).	
	1- 6-04	G. H. Tipper (27 N.).	3-12-24	G. Roerich (28 F.).	
15	28- 9-04	H. E. Stapleton (26 R.).	6- 6-27	B. D. Jain (28 R.).	
	2- 8-05	D. McCay (29 F.).	5-12-27	Sir Chhajuram Chow- dhury (27 R.).	
	3- 1-06	J. A. Chapman (28 N.).	5-12-27	H.H. Sir Tashi Nam- gyal (27 N.).	45
	7- 3-06	A. C. Woolner (28 N.).	5-12-27	H.H. Kunzang Dech- hen (27 N.).	
	19- 7-06	R. B. Whitehead (26 N.).	6- 2-28	Sir D. Ezra (28 R.)	
	3- 7-07	J. Coggin Brown (28 N.).	6- 2-28	Sir Kaiser Shumsher Jung Bahadur Rana (28 N.).	
20	3- 7-07	W. A. K. Christie (29 N.).	2- 7-28	N. Roerich (28 F.).	
	1- 1-08	Sir U. N. Brahma- chhari (27 R.).	5-11-28	W. Reinhart (28 F.).	50
	7- 4-09	C. A. Bentley (30 N.).	4-11-29	G. de P. Cotter (32 N.).	
	6-10-09	P. J. Brühl (28 N.).	3- 3-30	H. S. Ashton (30 N.).	
	4- 5-10	S. B. Dhavle (10 N.).	5- 1-31	P. Evans (31 N.).	
	4- 5-10	S. W. Kemp (29 F.).	7-11-32	Suvarna Shumser Jung Bahadur Rana (32 N.).	
25	1- 2-11	James Insch (28 R.).	6- 2-33	J. C. Ghatak (33 R.).	55
	7- 6-11	M. Hidayat Hosain (27 N.).	5- 2-34	H. M. Sale (34 N.).	
			5- 3-34	H.H. Sir K. Singh (34 N.).	



## SPECIAL ANNIVERSARY HONORARY MEMBERS.

Date of Election	(Science.)
15-1-34	BARON ERNEST RUTHERFORD OF NELSON, O.M., President, Royal Society, London.
15-1-34	PROF. ALBERT EINSTEIN, c/o Princeton University, New Jersey, U.S.A.
15-1-34	M. A. LACROIX, Secrétaire Perpétuel, Académie des Sciences, Paris.
15-1-34	SIR SYDNEY BURRELL, K.C.S.I., F.R.S., Foxhill, Salisbury Road, Farnborough, Hants, England.
15-1-34	DR. HENRY FAIRFIELD OSBORN, SC.D., LL.D., 15, West, 77 Street, New York City, U.S.A.
15-1-34	DR. SIR SVEN HEDIN, Stockholm, Sweden.

### (Letters.)

15-1-34	SIR JOHN MARSHALL, KT., c/o Messrs. Grindlay & Co., Ltd., 54, Parliament Street, London.
15-1-34	DR. RAHINDRA NATH TAGORE, Santiniketan, Bolpur, Birbhum.
15-1-34	PROF. TAHA HOSAIN, Cairo.
15-1-34	PROF. ARTHUR CHRISTENSEN, 62, Raadhusvej, Charlottenlund, Denmark.
15-1-34	DR. J. VAN KAN, President, Royal Society of Arts and Letters, Batavia, Java.
15-1-34	H.R.H. PRINCE DAMRONG RAJANUBHAB OF SIAM, Siam.

## ASSOCIATE MEMBERS.

Date of Election	
7-12-10	†H. HOSTEN, REV., S.J. 8, Chaussée de Haecht, Bruxelles, Belgium
1-2-22	*PIERRE JOHANNES, REV., S.J., B.LITT. (OXON), <i>Professor of Philosophy</i> , St. Xavier's College, 30, Park Street, Calcutta.
1-2-22	*ANANTAKRISHNA SASTRI, MAHAROPADHYAYA, VEDANTA-VISARADA, <i>Lecturer in Sanskrit, Calcutta University</i> , 32, College Square, Calcutta.
2-5-27	*N. N. VASU, RAI SAHIB, 20, Visvakosh Lane, Baghbazar, Calcutta.
2-12-29	†SARAT CHANDRA ROY, RAI BAHADUR, M.A., B.L., <i>Editor, 'Man in India'</i> , Church Road, Ranchi.
1-1-34	L. BOGDANOV, Flat 8-B, Solomon Mansions, 7, Royd Street, Calcutta.

\* Re-elected for a further period of five years on 7-3-1932 under Rule 2c.

† Re-elected for a further period of five years on 1-1-1934 under Rule 2c.

# INSTITUTIONAL MEMBERS.

Date of Election.		
28-10-29	The Legatum Warnerianum (Oriental Department), University of Leyden, Leyden, Holland	
2-12-29	The Adyar Library, Adyar, Madras S.	
4-5-31	The Benares Hindu University Library, Benares.	
1-6-31	The Ohtani University Library, Kyoto, Japan.	
7-12-31	The Annamalai University Library, Annamalai-nagar, Chidambaram, S. India.	5
30-10-33	The Allahabad University Library, Allahabad.	
30-4-34	The Bombay University Library, Bombay.	

# ORDINARY FELLOWS.

Date of Election.		
2-2-10	T. H. D. La Touche, B.A., F.G.S.	
2-2-10	Sir Pratulla Chandra Ray, KT., C.I.E., M.A., D.SC.	
2-2-10	Sir E. D. Ross, KT., C.I.E., PH.D.	
7-2-12	Sir J. C. Bose, KT., C.S.I., C.I.E., M.A., D.SC., F.R.S.	
7-2-12	P. J. Brühl, I.S.O., F.G.S., PH.D., F.C.S.	5
7-2-12	Sir Samuel R. Christophers, KT., C.I.E., O.B.E., I.M.S., F.R.S.	
7-2-12	C. S. Middlemiss, C.I.E., B.A., F.G.S., F.R.S.	
5-2-13	J. Ph. Vogel, PH.D., LITT.D.	
5-2-13	S. W. Kemp, B.A., D.SC., F.R.S.	
3-2-15	G. H. Tipper, M.A., F.G.S., M.INST.M.M.	10
2-2-16	Sir Richard Burn, KT., C.S.I., I.C.S.	
2-2-16	L. L. Fermor, O.B.E., A.R.S.M., D.SC., F.G.S., M.INST.M.M., F.R.S.	
7-2-17	F. H. Gravely, D.SC.	
6-2-18	J. L. Simonsen, D.SC., F.I.C., F.R.S.	
6-2-18	D. McCay, M.D., M.R.O.P., I.M.S.	15
5-2-19	J. Coggin Brown, O.B.E., M.I.M.E., F.G.S.	
5-2-19	W. A. K. Christie, B.SC., PH.D., M.INST.M.M.	
5-2-19	D. R. Bhandarkar, M.A., PH.D.	
5-2-19	R. B. Seymour Sewell, C.I.E., M.A., SC.D., M.R.C.S., L.R.C.P., F.L.S., F.Z.S., F.R.S., I.M.S.	
2-2-21	Sir U. N. Brahmachari, KT., M.A., PH.D., M.D., F.S.M.F.	20
1-2-22	Ramaprasad Chanda, B.A.	
4-2-25	M. Hidayat Hosain, PH.D.	
4-2-25	Sir C. V. Raman, KT., M.A., D.SC., PH.D., LL.D., F.R.S.	
1-2-26	P. O. Bodding, M.A.	
7-2-27	R. Knowles, B.A., M.R.C.S., L.R.O.P., I.M.S.	25
7-2-27	Johan van Manen, C.I.E.	
7-2-27	B. Sahni, D.SC.	
7-2-27	A. C. Woolner, C.I.E., M.A., D.LITT.	
6-2-28	H. E. Stapleton, M.A., B.SC., I.E.S.	
6-2-28	B. Prashad, D.SC., F.Z.S., F.R.S.E.	30
6-2-28	C. A. Bentley, C.I.E., M.B., D.P.H., D.T.M. & H.	
4-2-29	Sir Albert Howard, KT., C.I.E., M.A.	
4-2-29	J. H. Hutton, C.I.E., M.A., D.SC., I.C.S.	
4-2-29	Sir Edward D. MacLagan, K.C.S.I., K.C.I.E.	
3-2-30	H. W. Acton, C.I.E., M.R.C.S., L.R.C.P., I.M.S.	35
3-2-30	G. de P. Cotter, B.A., SC.D., M.INST.M.M., F.G.S.	
3-2-30	S. L. Hora, D.SC., F.Z.S., F.R.S.E.	
3-2-30	J. P. Mills, I.C.S., M.A., J.P.	

Date of Election		
3-2-30	Meghnad Saha, D.SC., F.R.S.	
2-2-31	S. Krishnaswami Aiyangar, M.A., PH.D., F.R.HIST.S.	40
2-2-31	R. N. Chopra, C.I.E., M.A., M.B., I.M.S.	
2-2-31	R. B. Whitehead, I.C.S. ( <i>retired</i> ).	
1-2-32	J. Bacot.	
6-2-33	Percy Brown, A.B.C.A.	
6-2-33	Ordhendra Coomar Gangoly, B.A.	45
6-2-33	Ghulam Yazdani, M.A.	
5-2-34	D. N. Wacha, M.A., B.SC., F.R.G.S., F.G.S.	

### HONORARY FELLOWS

Date of Election.		
5-2-96	CHARLES ROCKWELL LANMAN. 9, Farrar Street, Cambridge, Massachusetts, U.S.A.	
2-3-04	SIR GEORGE ABRAHAM GRIERSON, K.C.I.E., O.M., PH.D., D.LITT., LL.D., F.B.A., I.C.S. ( <i>retired</i> ). Rathfarnham, Camberley, Surrey, England.	
6-9-11	KAMAKHYANATH TARKAVAGISA, MAHAMAHOPADHYAYA. 111/4, Shambazar Street, Calcutta.	
5-8-15	SIR JOSEPH JOHN THOMSON, KT., O.M., M.A., SC.D., D.SC., LL.D., PH.D., F.R.S. Trinity College, Cambridge, England.	
5 6-12-16	G. A. BOULENGER, F.R.S., LL.D. Jardin Botanique du L'Etat, Brussels.	
2-5-17	HERBERT ALLEN GILES, M.A., LL.D., D.LITT., <i>Professor</i> . 10, Selwyn Gardens, Cambridge, England.	
4-2-20	SYLVAIN LEVI, D.LITT. Collège de France, rue Guy-de-la-Brosse 9, Paris, Ve.	
4-2-20	SIR AUREL STEIN, K.C.I.E., PH.D., D.LITT., D.SC., D.O.L., F.B.A. c/o Indian Institute, Oxford, England.	
10 4-2-20	A. FOUCHER, D.LITT. Boulevard Raspail 286, Paris, XVIe.	
4-2-20	SIR ARTHUR KEITH, M.D., F.R.C.S., LL.D., F.R.S. Royal College of Surgeons of England, Lincoln's Inn Fields, London, W.C. 2.	
4-2-20	R. D. OLDHAM, F.R.S., F.G.S., F.R.G.S. 1, Broomfield Road, Kew, Surrey, England.	
4-2-20	SIR DAVID PRAIN, KT., C.M.G., C.I.E., M.A., M.B., LL.D., F.R.S.E., F.L.S., F.R.S., F.Z.S., M.B.I.A. Royal Botanic Gardens, Kew, Surrey, England.	
4-2-20	SIR JOSEPH LARMOR, KT., M.P., M.A., D.SC., LL.D., D.O.L., F.R.S., F.R.A.S. St John's College, Cambridge, England.	
4-2-20	SIR JAMES FRAZER, KT., D.O.L., LL.D., LITT.D. Trinity College, Cambridge.	
15 4-2-20	J. TAKAKUSU. Imperial University of Tokyo, Tokyo, Japan.	
2-3-21	F. W. THOMAS, C.I.E., M.A., PH.D., <i>Boden Professor of Sanskrit, University of Oxford</i> . 161, Woodstock Road, Oxford, England.	
7-6-22	SIR THOMAS HOLLAND, K.C.S.I., K.C.I.E., D.SC., F.R.S. <i>Principal</i> , University of Edinburgh, Blackford Brae, Edinburgh.	
7-6-22	SIR LEONARD ROGERS, KT., C.I.E., M.D., B.S., F.R.C.P., F.R.S., I.M.S. 24, Cavendish Square, London, 4.	
7-1-25	STEN KONOW. Ethnographisk Museum, Oslo, Norway.	
20 7-3-27	RT. HON'BLE THE EARL OF LYTTON, P.C., G.C.S.I., G.C.I.E. Knebworth, Herts, England.	

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Date of Election	
4-7-27	C. SNOUCK HURGBONJE. Rapenburg 61, Leiden, Holland.
5-12-27	LT. COL. SIR T. WOLSELEY HAIG, K.C.I.E., C.S.I., C.B.E., M.A., C.M.G. 34, Gledstones Road, West Kensington, London, W. 14.
2-12-29	SIR RAJENDRA NATH MOOKERJEE, K.C.I.E., K.C.V.O. 7, Harington Street, Calcutta.
2-12-29	DR. CHARLES J. H. NICOLLE, <i>Director</i> . Pasteur Institute, Tunis.
5-5-30	DR. R. ROBINSON, D.SC., F.R.S. The Dyson Perrins Laboratory, 25 South Parks Road, Oxford, England.
5-5-30	DR. H. JACOBI, C.I.E. (HON.), 59, Niebuhrstrasse, Bonn, Germany.

## CHANGES IN MEMBERSHIP.

### LOSS OF MEMBERS DURING 1934.

#### BY RETIREMENT.

##### *Ordinary Members.*

1. C. A. J. Hendry. (1924.)
2. Sir Z. R. Z. Suhrawardy. (1927.)
3. J. G. Drummond. (1928.)
4. Mohd. Musa. (1925.)
5. P. K. Kurup. (1929.)
6. A. C. De. (1932.)
7. S. M. Sidiq. (1925.)
8. T. L. Martin. (1924.)
9. J. N. Mookerjee. (1924.)
10. I. M. Puri. (1928.)
11. H. M. Bose. (1925.)

#### BY DEATH.

##### *Ordinary Members.*

1. Sir C. C. Ghose. (1924.)
2. Kumar M. N. Mitter. (1906.)
3. Ekendra Nath Ghosh. (1918.)
4. Shiv Ram Kashyap. (1926.)
5. Sir P. C. Mitter. (1924.)

##### *Associate Member.*

1. MM. Kamal Krishna Smrititirtha. (1924.)

#### UNDER RULE 38.

1. J. C. Bose. (1922.)
2. M. S. Mani. (1929.)
3. N. L. Kothari. (1931.)
4. M. H. Moledina. (1928.)
5. H. K. Deb. (1917.)
6. S. L. Kapur. (1924.)
7. V. N. Swami. (1930.)
8. M. A. Abbasi. (1925.)

#### UNDER RULE 40.

1. Sir E. Pascoe. (1919.)
2. Sir P. Ginwala. (1929.)
3. S. A. Skinner. (1920.)
4. G. F. Rose. (1924.)
5. Sir F. P. Connor. (1920.)
6. G. E. Pilgrim. (1904.)
7. Sir A. M. Stow. (1923.)

## MEDALLISTS.

### ELLIOTT GOLD MEDAL AND CASH.

#### RECIPIENTS.

- 1893 Chandra Kanta Basu.
- 1895 Yati Bhusana Bhaduri.
- 1896 Jnan Saran Chakravarti.
- 1897 Sarasi Lal Sarkar.
- 1901 Sarasi Lal Sarkar.
- 1904 { Sarasi Lal Sarkar.
- Surendra Nath Maitra.
- 1907 Akshoy Kumar Mazumdar.
- 1911 { Jitendra Nath Rakshit.
- Jatindra Mohan Datta.
- Rasik Lal Datta.
- 1913 { Saradakanta Ganguly.
- Nagendra Chandra Nag.
- Nilratan Dhar.
- 1918 Bibhutibhushan Dutta.
- 1919 Jnanendra Chandra Ghosh.
- 1922 Abani Bhusan Datta.
- 1923 Bhailal M. Amin.
- 1926 Bidhu Bhusan Ray.
- 1927 Kalipada Biswas.
- 1931 T. C. N. Singh.
- 1932 P. N. Das-Gupta.
- 1933 Nirmal Kumar Sen.
- 1934 D. P. Roy Chowdhury.

### BARCLAY MEMORIAL MEDAL.

#### RECIPIENTS.

- 1901 E. Ernest Green.
- 1903 Sir Ronald Ross, K.T., K.C.B., C.I.E., K.C.M.G., M.R.C.S.,  
F.R.C.S., D.P.H., LL.D., D.S.C., M.D., F.R.S.
- 1905 D. D. Cunningham, C.I.E., F.R.S.
- 1907 A. W. Alcock, C.I.E., M.B., LL.D., F.R.S.
- 1909 Sir David Prain, K.T., C.I.E., C.M.G., M.A., M.B., LL.D., F.R.S.E.,  
F.L.S., F.Z.S., M.R.I.A., F.R.S.
- 1911 Carl Diener.
- 1913 William Glen Liston, C.I.E., M.D., D.P.H.
- 1915 J. S. Gamble, C.I.E., M.A., F.R.S.
- 1917 H. H. Godwin-Austen, F.R.S., F.Z.S., F.R.G.S.
- 1919 N. Annandale, C.I.E., D.S.C., C.M.Z.S., F.L.S., F.R.S., F.A.S.B.
- 1921 Sir Leonard Rogers, K.T., C.I.E., M.D., B.S., F.R.C.P., F.R.C.S.,  
F.R.S.
- 1923 Sir Samuel Christophers, C.I.E., O.B.E., F.R.S., F.A.S.B., M.B.,  
LT.-COL., I.M.S.
- 1925 J. Stephenson, C.I.E., B.S.C., M.B., CH.B., F.R.S., F.R.C.S.,  
F.R.S.E., LT.-COL., I.M.S.
- 1927 S. W. Kemp, B.A., D.S.C., F.R.S., F.A.S.B.
- 1929 Sir Albert Howard, C.I.E., M.A., F.A.S.B.

- 1931 R. B. Seymour Sewell, C.I.E., M.A., SO.D. (CANTAB.),  
M.B.C.S., L.R.C.P., F.Z.S., F.L.S., F.A.S.B., F.R.S., LT.-COL.,  
I.M.S.  
1933 R. Row, O.B.E., D.S.O.
- 

## SIR WILLIAM JONES MEMORIAL MEDAL.

### RECIPIENTS.

- 1927 Sir Malcolm Watson, KT., LL.D. (HON.), M.D., C.M., D.P.H.  
1928 Sir George A. Grierson, K.C.I.E., O.M., PH.D., D.LITT., LL.D.,  
F.B.A., HON. F.A.S.B., I.C.S. (*retired*).  
1930 Dr. Felix H. D'Herelle.  
1932 Dr. C. Snouck Hurgronje.  
1934 Rai Sir Upendra Nath Brahmachari, Bahadur, KT., M.A.,  
M.D., PH.D., F.S.M.F., F.A.S.B.
- 

## ANNANDALE MEMORIAL MEDAL.

### RECIPIENTS.

- 1927 Fritz Sarasin.  
1930 Dr. Charles Gabriel Seligman, M.D., F.R.C.P., F.R.S.  
1933 Dr. Eugène Dubois.
- 

## JOY GOBIND LAW MEMORIAL MEDAL.

### RECIPIENTS.

- 1929 Max Weber.  
1932 Dr. Ernst J. O. Hartert, PH.D.
- 

## PAUL JOHANNES BRÜHL MEMORIAL MEDAL.

### RECIPIENTS.

- 1931 Rev. Ethelbert Blatter, S.J.  
1934 Isaac Henry Burkill, M.A.

# PROCEEDINGS OF THE ORDINARY MONTHLY MEETINGS, 1934.

JANUARY, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 1st. at 5-30 p.m.

## PRESENT :

RAI UPENDRA NATH BRAHMACHARI BAHADUR, M.A., M.D., Ph.D., F.S.M.F., F.A.S.B., Medical Secretary. in the Chair.

## Members :

Brown, Mr. Percy  
Fawcus, Mr. L. R.  
Hora, Dr. S. L.

Jenkins, Dr. W. A.  
Kavyatirtha, Pt. R. D.  
Manen, Mr. Johan van

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of six presentations of books, etc. which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members :-

(1) *Ahmad, Mian Jamal-Ud-Din*, B.A., B.T., Member, Bureau of Education, Afghanistan. 2. *Andrabi*, Kabul, Afghanistan.

Proposer : M. Mahfuz ul Haq.

Seconder : S. L. Hora.

(2) *Goil, D. P.*, M.B., Ch.B., F.R.S.E., Lt.-Col. I.M.S., Surgeon-General with the Government of Bengal, 245, Lower Circular Road, Calcutta.

Proposer : S. L. Hora.

Seconder : U. N. Brahmachari.

The General Secretary reported the following loss of membership since the previous meeting, by resignation :—

(17) *V. V. Sohoni* (An Ordinary Member, 1926).

The General Secretary reported that Mr. N. G. Majumdar who had resigned in 1931, had now regularised his position and had consequently been re-admitted as a member.

In accordance with Rule 38, the General Secretary announced that the names of the following Ordinary Members, who had, since the last meeting, been suspended as defaulters within the Society's building, had now been removed as defaulters from the Society's registers for non-payment of dues :—



A. Mannan Baidil.  
Sardar M. Rai B. Rai.  
Raja Ram Chandra Dev.  
Nawab Musharuff Hosain.  
Sir M. Rathnaswami.  
Shyamnandan Sahaya.  
H. L. Chhibber.  
Rev. B. A. Helland.

Syed Hasan Imam.  
T. C. Raparia.  
S. M. Afzal.  
D. N. Majumdar.  
W. B. S. Nyss.  
S. C. Sanyal.  
D. B. S. Sastri.  
Budh Behari Lal.

In accordance with Rules 2 and 13, the Chairman called for a ballot for re-election, for a further period of five years, of—

1. Rev. H. Hosten, S.J.,
2. MM. K. K. Smrtitirtha,
3. Rai Bahadur S. C. Roy,

and for election of —

4. Mr. L. Bogdanov,

as Associate Members of the Society, proposed for election in the last Ordinary Monthly Meeting.

The Chairman announced the results of the ballots for the elections of Ordinary Members and Associate Members and declared all candidates duly elected.

The Chairman announced that the Annual Meeting of the Society would take place on Monday, the 5th February, 1934, and invited the members present to communicate to the General Secretary the names and addresses of non-members to whom they wished invitations to be issued.



## FEBRUARY, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 5th, immediately after the termination of the Annual Meeting.

### PRESENT :

L. L. FERMOR, Esq., O.B.E., D.Sc., A.R.S.M., M.Inst.M.M., F.G.S., F.A.S.B., President, in the Chair.

### Members :

Agharkar, Dr. S. P.  
Biswas, Mr. K. P.  
Bogdanov, Mr. L.  
Brahmachari, Dr. U. N.  
Brown, Mr. Percy  
Chatterjee, Mr. P. P.  
Chopra, Lt.-Col. R. N.  
Coulson, Dr. A. L.  
Ezra, Sir David  
Ghosal, Dr. U. N.  
Guha, Dr. B. S.

Haq, Mr. M. M.  
Heron, Dr. A. M.  
Hobbs, Mr. Harry  
Hora, Dr. S. L.  
Hosain, Dr. M. Hidayat  
Hubert, Mr. O.  
Kavyatirtha, Pt. R. D.  
Krishnan, Dr. M. S.  
Law, Dr. S. C.  
Majumdar, Mr. N. K.  
Manen, Mr. Johan van

Mani, Mr. M. S.  
 Mookerjee, Mr. R. P.  
 Mukherjee, Dr. J. N.  
 Prashad, Dr. Bainsi  
 Rahman, Mr. S. K.

Ray, Dr. H. C.  
 Rossetti, Mr. F. F. L.  
 Sarvadhikary, Sir D. P.  
 Seal, Mr. S. C.  
 Wadia, Mr. D. N.

### Visitors :

Fermor, Mrs.

Parkinson, Mr. C. L.  
 Sale, Mr. H. M.

The minutes of the last meeting were read and confirmed.

The General Secretary announced that the presentations of books, etc. received during the last month would be exhibited in the next Monthly Meeting.

The following candidates were balloted for for election as Ordinary Members :—

(3) *Selzam, Edwart von*, German Diplomatic Service, Acting Consul General for Germany, 18, Store Road, Ballygunge, Calcutta.

Proposer : L. L. Fermor.

Seconder : Johan van Manen.

(4) *Vasu, Visva Nath*, 8, Visvakosh Lane, Baghbazar, Calcutta.

Proposer : Ramaprasad Chanda.

Seconder : Nagendra Nath Vasu.

(5) *Richter, Herbert*, Dr. Jur., Vice-Consul for Germany, 3, Lansdowne Road, Calcutta.

Proposer : O. Hubert.

Seconder : Johan van Manen.

(6) *Law, Bhabani Churn*, Merchant, Zemindar and Artist, 223, Cornwallis Street, Calcutta.

Proposer : Johan van Manen.

Seconder : L. L. Fermor.

(7) *Pasricha, Chirunji Lal*, M.A., M.B., B.Chir. (Cantab.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), Captain, I.M.S., Professor of Pathology, Bacteriology and Helminthology, School of Tropical Medicine and Hygiene, Chittaranjan Avenue, Calcutta.

Proposer : L. L. Fermor.

Seconder : Johan van Manen.

(8) *Nariman, Rustom K.*, M.I.C.E., A.C.H., F.R.G.S. (Retired Superintending Engineer, Punjab Irrigation), Professor of Engineering, Osmania University, 'Gulistan', Sappers Lines, Secunderabad, Deccan.

Proposer : D. N. Wadia.

Seconder : L. L. Fermor.

(9) *Bhuyan, Suryya Kumar*, M.A., B.L., A.E.S., Honorary Provincial Director of Historical and Antiquarian Studies, Assam ; Professor, Cotton College, Gauhati, Assam.

Proposer : J. P. Mills.

Seconder : K. L. Barua.

(10) *Sale, Harold Montague*, M.A., F.G.S., Geologist, Burmah Oil Co., Ltd., o/o Burmah Oil Co., Ltd., Badarpurghat P.O., Sylhet, Assam.

Proposer : L. L. Fermor.

Seconder : Johan van Manen.

(11) *Percival, Fredrick George*, B.Sc., Ph.D. (Lond.), F.G.S., General Superintendent, Ore Mines and Quarries, Tata Iron and Steel Co., Ltd., Jamshedpur.

Proposer : L. L. Fermor.

Seconder : Johan van Mauen.

(12) *Bates, William Hayes*, Ceramic Engineer, Burn & Co., Ltd., Ranigunj, Dt. Burdwan.

Proposer : L. L. Fermor.

Seconder : A. M. Heron.

(13) *Kirby, Walter*, B.Sc., Inspector of Mines in India, Dhanbad, E.I.R.

Proposer : L. L. Fermor.

Seconder : A. M. Heron.

(14) *Williamson, Fredrick*, I.C.S., Political Officer in Sikkim, Gangtok, Sikkim.

Proposer : L. L. Fermor.

Seconder : Johan van Mauen.

(15) *Haldar, Bharati Vikas*, M.A., B.L., Advocate, High Court, 47, Haldarpara Road, Kalighat, Calcutta.

Proposer : Amareswar Thakur.

Seconder : S. K. Chatterji.

The General Secretary drew attention of the members to the presentation by Sir David Ezra of a copy of the Descriptive Catalogue of Hebrew and Samaritan Manuscripts in the Sassoon Library, London, compiled by David Solomon Sassoon, Sir David's brother-in-law.

Unanimously resolved to express the Society's thanks to the generous donor.

Before proceeding to the remainder of the business for the evening the President made the following announcement :—

'I would propose that this Ordinary Meeting should formally confirm the election of the twelve Special Anniversary Honorary Members whom we elected in the Anniversary Meeting on January 15th.

'Such Anniversary members are not defined in our Rules and no specific direction exists for the method of their election. It seems to me desirable that in this case we should follow the analogy of the election of Associate Members and confirm the election in the next meeting held after the one in which they were first proposed.'

Unanimously resolved to confirm the election of the twelve Special Anniversary Honorary Members made in the Anniversary Meeting of the Asiatic Society of Bengal on January the 15th, as follows :—

1. Baron Ernest Rutherford of Nelson.
2. Prof. Albert Einstein.
3. M. A. Lacroix.
4. Sir Sydney Burrard.

5. Dr. Henry Fairfield Osborn.
6. Dr. Sir Sven Hedin.
7. Sir John Marshall.
8. Dr. Rabindra Nath Tagore.
9. Prof. Taha Hosain.
10. Prof. Arthur Christensen.
11. Dr. J. Van Kan.
12. H.R.H. Prince Damrong Rajanubhab of Siam.

The General Secretary announced the following loss of membership, since the previous meeting, by death :—

- (1) MM. Kamal Krishna Smrititirtha (An Associate Member, 1924).

The General Secretary announced receipt of news of the death of Dr. Ernst Hartert, one of the recipients of the Joy Gobind Law Memorial Medal of the Society (1933).

The President announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.



### MARCH, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 5th, at 5-30 P.M.

#### PRESENT :

L. L. FERMOR, ESQ, O.B.E., A.R.S.M., D.Sc., F.G.S.,  
M.Inst.M.M., F.A.S.B., President, in the Chair.

#### Members :

Agharkar, Dr. S. P.	Heron, Dr. A. M.
Bogdanov, Mr. L.	Hobbs, Mr. H.
Bose, Mr. M. M.	Hora, Dr. S. L.
Brahmachary, R. B. S. C.	Jain, Mr. C. L.
Brown, Mr. Percy	Manon, Mr. Johan van
Coulson, Dr. A. L.	Mani, Mr. M. S.
Dods, Mr. W. K.	Prashad, Dr. B.
Ezra, Sir David	Sarvadhikary, Sir D. P.
	Wadia, Mr. D. N.

#### Visitors :

Acharya, Mr. M. N.	Bhattacharya, Mr. Bhabatosh
	Mukhorjee, Mr. D. D.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of thirteen presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members :—

(16) *Sharma, M. S. M.*, Special Correspondent, 'The Hindu', 23C/1, Mahendra Road, Bhawanipore, Calcutta.

Proposer : L. L. Fernor.

Secunder : Baini Prashad.

(17) *Craddock, Walter Merry*, D.S.O., Colonel, M.C., Sheriff of Calcutta, Stock Broker, Bengal Club, Calcutta.

Proposer : L. L. Fernor.

Secunder : Johan van Manen.

(18) *Singh, The Hon'ble Maharajahdiraja Sir Kameshwar*, K.C.I.E., Darbhanga.

Proposer : Sir David Ezra.

Secunder : L. L. Fernor.

(19) *Modi, Jchangir Jeevanji Jamshedji*, Merchant, 5, Dhurruntollah Street, Calcutta.

Proposer : D. N. Wadia.

Secunder : E. S. Olpadvala.

The General Secretary reported the following loss of membership since the previous meeting, by death :—

(2) The Hon'ble Sir P. C. Mitter (An Ordinary Member, 1924).

The Chairman called upon Dr. Baini Prashad to read an obituary notice of Dr. Ernst Hartert (*vide* page 185).

The Chairman called upon Mr. Bhabatosh Bhattacharya to read an obituary notice of MM. Kamalkrishna Smrtitirtha (*vide* page 186).

The Chairman called upon Mr. Johan van Manen to read an obituary notice of the Hon'ble Sir P. C. Mitter (*vide* page 188).

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(1) C. A. John Hendry (An Ordinary Member, 1924).

The General Secretary reported the constitution of the various standing Committees of the Society for 1934-35 to be as follows :—

#### Finance :

President.	} <i>Ex-officio.</i>
Treasurer.	
General Secretary.	
Dr. A. M. Heron.	
Dr. J. N. Mukherjee.	

#### Library :

President.	} <i>Ex-officio.</i>
Treasurer.	
General Secretary.	
Philological Secretary.	
Jt Philological Secretary.	
Biological Secretary.	
Physical Science Secretary.	
Anthropological Secretary.	
Medical Secretary.	
Library Secretary.	

*Publication :*

President.	} <i>Ex-officio.</i>
Treasurer.	
General Secretary.	
Philological Secretary.	
Jt. Philological Secretary.	
Biological Secretary.	
Physical Science Secretary.	
Anthropological Secretary.	
Medical Secretary.	
Library Secretary.	

The following communications were made :—

1. BAINI PRASHAD.—*Harappa animal Remains.*

The animal remains excavated at Harappa from 1924-25 to 1930-31 by the Archaeological Survey of India have yielded very interesting material of 30 species of invertebrates and vertebrates. A general comparison of the species obtained at Harappa is made with those excavated at Mohenjo-daro, and attention is directed to the great deal of light which these extensive collections have thrown on the probable ancestry and centres of domestication of such forms as dog, cattle, buffalo, goat, sheep, pig and camel.

2. S. L. HORA.—*Fish Slime and Precipitation of suspended Mud in Water.*

The slipperiness of the body of a fish is due to the presence of a slimy mucus secreted by special skin glands. The function of the slime is supposed to be 'to minimize friction with the surrounding water and to enable the fish to glide along easily'. While investigating the biology of *Lepidosiren*, a lung-fish of South America, Prof. J. Graham Kerr found that the 'mucous secretion of the skin of *Lepidosiren* appears to have a remarkable power of precipitating mud held in suspension in water'. In connection with my work on the ecology of certain estuarine fishes Prof. Graham Kerr suggested to me to test whether the slime of these fishes reacts similarly to that of *Lepidosiren*. Water in which fishes had been kept for some time was used for testing this property, and it was found that this 'slime-solution' had remarkable power of precipitating mud held in suspension. A demonstration of the actual process was given in the meeting.

Investigations have been started for testing the slime in the case of several other clear-water and muddy-water fishes.

There appears to be a special biological significance of this phenomenon. 'Water-breathing' fishes are usually suffocated in muddy water, and in several parts of India advantage is taken of this fact for fishing purposes. By the precipitation of the mud with the help of the mucus the water-breathing fish are able to have clear water for respiration by means of their

gills, which, it may be remarked, are very delicate structures, and likely to be choked with mud in dirty water.

The following exhibits were shown and commented upon :—

1. M. S. MANT.—*An interesting case of Cladode-formation in certain Plants due to the Attack of Gall-forming Organisms.*

Certain minute gall-forming organisms, such as mites, aphids, etc., attacking in very large numbers the surface of the stems of plants give rise to the formation of very peculiar cladode-like growths. Like the true cladodes, such pathological cladodes or *Platyclad galls* also proceed from the same cause, namely, xerophytic conditions. The thousands of mites sucking the plant juice at the surface has the same effect as the excessive transpiration which gives rise to cladodes and consequently a flattening of the attacked stem results. The flattening is also accompanied by a general swelling of the growth, owing to the fact that in addition to the effect of excessive removal of sap from their surface, a certain amount of cell proliferation also takes place as a result of the attack.

Platyclad galls often have extraordinarily curious shapes but in all cases the flattening of the stem is prominent. The cladode-like galls of *Flacourtia sepiaria* Roxb., caused by a mite, are exhibited. One specimen is seen to be long and undulate, with suppressed internodes and crowded leaves. The other specimen is peculiarly coiled like a watch spring. The pathological aspect of the formation of these galls was further explained.

2. M. S. MANT.—*The 'Wireless' Aerials of Gall-midges.*

Among the various complex antennal structures of the gall-midges (*Cecidomyidæ*), the circumfila are the most interesting. They have been described as auditory structures but there is evidence to believe that they play in the male the rôle of 'aerials' for receiving and tuning in a wave of some kind transmitted through space from the antennæ of the female gall-midge and thus serve as the receiving set for the wireless messages of love. The emanations from the female appear to be of the kind of electro-magnetic waves, with wave-lengths very nearly approaching but not quite the same as those of the visible spectrum. Consequently the tuning in of these waves by the male circumfila appear to be considerably interfered with by the presence of ordinary light and the male gall-midge mistakes in such cases the rays of the so-called visible light for the emanations from the female. Thus while in response to a 'call', a male midge is flying in a particular direction, any light rays happening to cross its path confuses it. The midge then turns towards and flies to the light. Many gall-midges are thus found near light.

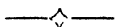
This is the new function tentatively assigned to the circumfila of the gall-midges, which would also explain at the same time why gall-midges fly towards light. Various modifications of the circumfila are exhibited. The structure was described in detail and the function further explained with accounts of some experiments.

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.



APRIL, 1934.

*No Meeting.*



MAY, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 7th, at 5-30 p.m.

#### PRESENT :

A. M. HERON, Esq., D.Sc. (Edin.), F.G.S., F.R.G.S., F.R.S.E.,  
Library Secretary, in the Chair.

#### *Members :*

Bhattacharya, Mr. Bisvesvar  
Bogdanov, Mr. L.  
Driver, Mr. D. C.

Ghuznavi, Mr. I. S. K.  
Hora, Dr. S. L.  
Jam, Mr. Chhotelal

Manen, Mr. Johan van

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of eight presentations of books, etc., which had been placed on the table for inspection.

The General Secretary announced the presentation to the Society by M. J. Delacour of a copy of his work on the ' Birds of French Indo-China '.

The General Secretary drew the attention of the members to a recent issue of the catalogue of books in European languages in the Society's library.

The General Secretary reported receipt of news of the election of Dr. L. L. Fermor and Lt.-Col. R. B. S. Sewell to Fellowship of the Royal Society.



The following candidates were balloted for for election as Ordinary Members :—

(20) *Bent, William Antony*, Assistant, Messrs. George Henderson & Co., Ltd., 101/1, Clive Street, Calcutta.

Proposer : H. Richter.

Seconder : J. A. Clough.

(21) *Duncan, Percival Cairncross*, Mercantile Assistant with Messrs. George Henderson & Co., Ltd., 101/1, Clive Street, Calcutta.

Proposer : H. Richter.

Seconder : O. Hubert.

The General Secretary reported that an application for Institutional Membership had been received from :—

(7) The Librarian, Bombay University, Bombay, which had been accepted by the Council.

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(2) Sir Zahid Suhrawardy (An Ordinary Member, 1927).

(3) J. G. Drummond (An Ordinary Member, 1928).

The following papers were read :—

1. T. A. WELLSTED.—*Notes on the Vakatakas of the C.P. and Berar, and their Country, 4th to 6th century A.D.*

*Part One.* A general description of a number of old settlements near Ramtek distinguished by the occurrence of ' Gupta ' type bricks, etc., and a short general description of two major sites at Mansar and Nandpur, in which it is suggested that the identification of the ancient Nandivardhana with Nagardhan near Ramtek is not very convincing, but that there seem to be good grounds for identifying it with the Nandpur mentioned in the paper.

*Part Two.* A detailed description of the Mansar site, with accounts of the monastery area, a supposed fire altar site and burial shaft. It is believed that the altar site described is unique.

*Part Three.* A short examination of early Vakataka history in which it is suggested that the evidence points to their having been predominantly Southern rulers, and it is suggested that the discoveries described in these notes lend some weight to the supposition that the Vakataka capital was situated near Ramtek.

2. M. K. SUBRAMANIAM.—*Temperature as a Factor in Sex Determination in Man.*

It has long been recognized that there is a seasonal variation in the proportion of sexes in the progeny produced by various animals. This has been demonstrated in Man by Heape, in Mice by Parkes, in *Peromyscus* by Sumner, in

Albino Rats by King and Stotsenberg, and in Dogs by Heape. Various explanations have been offered to this phenomenon at various times. The Hindus 2,000 years ago attributed it to the variation in the equilibrium between the three humours of the body and early in the Twentieth Century scientists attributed it to metabolism and a certain inherent rhythm. Climate is divided according to temperature, rain, and other meteorological conditions and as temperature is an important factor an attempt has been made in this paper to correlate seasonal variation in the sex ratio with temperature conditions. *Conclusion.* If, as Orton has shown, particular temperature conditions are required for reproduction, it is also possible that the sex of a child may be similarly affected by temperature.

The following exhibit was shown and commented upon :—

1. I. S. K. GHUZZNAVI.— *A ringed Bird captured in Bengal.*

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.



JUNE, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 4th, at 5-30 P.M.

PRESENT :

RAI SIR UPENDRA NATH BRAHMACHARI BAHADUR, Kt., M.A., M.D., Ph.D., F.S.M.F., F.A.S.B., Vice-President, in the Chair.

*Members :*

Brahmachary, R. B. S. C.  
Brown, Mr. Percy  
Chatterji, Mr. P. P.  
Ghose, The Hon'ble Mr. Justice M. C.  
Ghose, Mr. T. P.  
Ghosh, Mr. P. N.  
Guha, Dr. B. S.

Jain, Mr. C. L.  
Krishnan, Dr. M. S.  
Manen, Mr. Johan van  
Mitter, Mr. K. N.  
Mukherjee, Dr. J. N.  
Stagg, Lt.-Col. M.  
Urquhart, Dr. W. S.

*Visitors :*

Roy Chowdhuri, Mr. S. P.

Majumdar, Mr. B. R.

The minutes of the last meeting were read and confirmed.

On behalf of the Society the General Secretary conveyed to Sir Upendra Nath Brahmachari their hearty congratulations with the conferment upon him by His Majesty of the dignity of Knighthood.

Sir Upendranath replied briefly.

The General Secretary reported receipt of four presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members :—

(22) *Daver, Nanabhoy Sorabji*, B.A. (Hons.), Mercantile, c/o Parke, Davis & Co., 5, Dhurantola Street ; and 275, Bowbazar Street, Calcutta.

Proposer : M. D. Darbari.

Seconder : Johan van Manen.

(23) *Chatterji, Bijan Raj*, Ph.D. (London), D.Litt. (Punjab), Professor of History, Meerut College, Meerut ; and 5, Wood Street, Calcutta.

Proposer : P. C. Bagchi.

Seconder : M. Hidayat Hosain.

The following papers were read :—

1. J. A. DUNN. *Late tertiary Uplift in Singhbhum.*

Evidence is noted of differential uplift in Singhbhum to the extent of 300-350 feet. The raised area has, since uplift, been subjected to erosion by streams which are working practically at base level, and small plateaux, rising some 200-400 feet above the present plains, are all that remain of the old peneplain. Certain gravels and grits, often consolidated, have taken part in these movements, and the gravels are found in places at the top of the residual plateaux.

The amount of erosion, since uplift, by streams working practically at base level, suggest an age earlier than Pleistocene for the gravels and period of uplift.

2. GEORGE P. CONGER.—*Cosmic Persons and Human Universes in Indian Philosophy.*

Twelve years ago the author published a work on macrocosms and microcosms in which he dealt with this subject as found in western philosophy. The present paper is an appendix dealing with the Indian material. It endeavours to focus in small compass the material from a historical and bibliographical point of view so as to form a compendium suitable as a basis for any further research.

3. M. ABDUL MAJEED. *Occurrence and Distribution of Diatoms in the Punjab.*

Analysis of the contents of a collection of 130 tubes made by the writer from October 1930 to June 1931 mainly from Lahore and its vicinity, also from Gujranwala, Hafizabad, Daska, and other places. Sub-aerial Association. Aquatic Association. Epiphytic forms. Distribution.

4. SARAT CHANDRA MITRA.—*On Plant-lore from Bihar.*

A case of intertwined Pipal and Banyan. Explained as retribution for unpaid borrowed money. A similar myth

regarding parasitical plants growing upon trees. Hindu custom of planting several sacred trees together. Planting of groves to earn religious merit. Mock marriages of mango-groves. The back-biter of Muzaffarpur. Ancestor-worship.

5. SARAT CHANDRA MITRA.—*A note on the Cult of the agricultural Deities, Sama and Chako, in North Bihar.*

Description of a children's game which is a form of crypto-worship, probably the survival of some aboriginal cult, connected with the male productive and female generating powers of nature.

6. SARAT CHANDRA MITRA.—*On the Worship of the Plough in North Bihar.*

Worship in the months of Kārtik and Māgh. Legendary Origin. Animism of Fetichism? European parallels. Orāon worship of the ploughshare.

7. SARAT CHANDRA MITRA.—*On a curious Cult of Orissa.*

The cult of Dihwār or (hirkutwā-Pir, the Saint of Rags and Tatters. The cult of Dhelhā, the Saint of Clods. The cult of Dhelāi Chandī, Our Lady of Clods. The cult of Ghorā-muhā Bāsuli, the mare-headed Bāsuli. Totemistic considerations. Totemism in India.

The following communications were made :—

1. J. N. MUKHERJEE.—*Fish Slime and Precipitation of suspended Mud in Water.*

Dr. S. L. Hora communicated in the March Meeting of the Society a case of mucous slime secretion of estuarine fishes in India, with a remarkable power of precipitating mud held in suspension.

The present communication deals with the chemical aspect of the problem.

2. S. P. ROY CHOWDHURY.—*A note on the precipitating Action of slime Water obtained from Bora Fish.*

The slime water was obtained from the Bora Fish by keeping it in conductivity water (No. 1) for some time, and also in tap water (No. 2). The fish (No. 1) died within an hour and a half after immersion in conductivity water. On the other hand in tap water the fish (No. 2) is still living after nearly two months. The slime waters (Nos. 1 and 2) have an acidic reaction and have been found to exert a sensitising effect on negatively charged colloidal solution of clay and of gold (Zsigmondy's method) as also on positively charged ferric hydroxide sol. On passing an electric current through the slime water (No. 2) a few white flocculi separate at the negative electrode. It also appears that the slime water (No. 2) has practically no effect on the electric charge of the clay suspension. Also it is

found that the pH of the clay suspension with slime water decreases from 7.5 to 5.0.

The slime water has thus a definite sensitising effect. It is possible that this effect is greater at the surface of the first than that observed with the slime extract.

The following exhibit was shown and commented upon :—

1. JOHAN VAN MANEN.—*Three large Specimens of Limonite from China.*

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman then placed before the meeting for discussion the following notice to the Resident Members issued under Rule 64A.

#### NOTICE TO THE RESIDENT MEMBERS.

During the long history of the Asiatic Society of Bengal the question of applying for a Royal Charter has been raised on previous occasions. It is a tradition within the British Empire that distinguished scholarly bodies may receive such a Charter, on the one hand to enhance their prestige, and on the other to obtain the legal and other privileges connected therewith, such as becoming a body corporate.

In the outside world the impression is widely prevalent that the Society already possesses a Royal Charter and much of the official and private correspondence received is addressed to it under the style of the Royal Asiatic Society of Bengal. On the occasion of the recent celebration of the 150th Anniversary of the Society's foundation not the least gratifying aspect has been the generous appreciation expressed by various Royal Societies within the British Empire and equivalent bodies in other countries.

The name Asiatic Society of Bengal contains an element of confusion inasmuch as the designation Bengal refers only to the location of the Society but not to its activities. The latter have an all-Asia scope. The Society's membership is drawn from all over India.

During the first period of its existence the Asiatic Society of Bengal was unique in India and focussed as a single body almost all scholarly endeavours, both scientific and literary, undertaken in this country. In the 150 years which have elapsed since the foundation of the Society the position has materially altered. A great number of specialized or localized scholarly Societies have sprung into existence and Institutions of various kinds prosecute the Asiatic Researches which 150 years ago were practically monopolized by the Asiatic Society of Bengal in this Continent.

For all these reasons the Council of the Society has judged the time ripe to apply for a Royal Charter for the Society, which, if granted, would enable it to fall, also formally, into line with its sister Societies throughout the British Empire, and have the effect of consolidating the position which it has actually occupied so long.

The Council further considers it desirable that the old designation of 'Asiatic Society of Bengal' with all its associations and prestige should be preserved, but that at the same time the name and style of the Society should contain a clear indication of its all-India character.

The Council has therefore resolved that under Rules 64, 64A, and 78 of the Society's constitution a vote of the general body of its members should be taken to ascertain their views in the matter. According to

the Rules, preliminary to the issue of a voting paper, the question must be placed for consideration before a General Meeting of the Society and the resident members must be notified by printed circular of the nature of the proposals and the reasons for them. Under this Rule the present notice is being sent out.

The proposals of the Council on which they intend to take the vote of the general body of members are two-fold as follows :—

- (1) That the Asiatic Society of Bengal do make an application for the grant of a Royal Charter.
- (2) That the name and style under which the Charter should be petitioned for be that of 'Royal Asiatic Society of India, Asiatic Society of Bengal'.

These two proposals will be discussed in the Ordinary General Meeting to be held on Monday, 4th June, 1934, at 5-30 P.M., at the Society's Rooms, No. 1, Park Street, Calcutta.

ASIATIC SOCIETY OF BENGAL,  
1, PARK STREET,  
Calcutta, 31st May, 1934.

JOHAN VAN MANEN,  
*General Secretary.*

The Chairman after explaining the Council's views in the matter called for remarks from the members on the above.

After full discussion it was unanimously resolved that the Society should make an application for the grant of a Royal Charter.

It was also unanimously resolved that it was desirable to have contained in the name under which the Charter should be granted an indication of the All-India status of the Society, whilst at the same time preserving the words contained in the old title 'Asiatic Society of Bengal'.

It was further resolved that the members present preferred the form 'Asiatic Society of Bengal, Royal Asiatic Society of India' to the form proposed by the Council, 'Royal Asiatic Society of India, Asiatic Society of Bengal'.

One member suggested that a suitable compromise would be a name as follows :—

'Royal Asiatic Society of Bengal and India.'

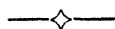
It was also pointed out that the designation 'Royal' would perhaps in any case be required to precede all other parts of the name.

The General Secretary explained on behalf of the Council that application for the grant of a Charter would have to be made in the form of a humble petition and that in the matter of the wording of the name only a desire could be expressed but no demand made, and that, as His Majesty's advisers would have to consider the question under its various very comprehensive bearings, it would be desirable that the application should only suggest a name, leaving open the way for the introduction

of minor variations by the introduction of the words 'of the type of'.

It was unanimously agreed to that the Council should be left latitude in this matter and that the name to be suggested should be preceded by the qualification 'of the type of'.

After the resolution was passed the Hon'ble Mr. Justice M. C. Ghose requested that under Rule 64A his objection to this resolution might be recorded, namely, that in his opinion a change of name of the Society was undesirable.



### JULY, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 2nd, at 5-30 P.M.

### PRESENT :

RAI SIR UPENDRA NATH BRAHMACHARI BAHADUR, Kt., M.A., M.D., Ph.D., F.S.M.F., F.A.S.B., Vice-President, in the Chair.

### *Members :*

Agharkar, Dr. S. P.  
Bent, Mr. W. A.  
Bogdanov, Mr. L.  
Brown, Mr. Percy  
Chattopadhyay, Mr. K. P.  
Driver, Mr. D. C.

Duncan, Mr. P. C.  
Hora, Dr. S. L.  
Hosain, Dr. M. Hidayat  
Jain, Mr. Chote Lal  
Manen, Mr. Johan van  
Rossetti, Mr. F. F.

### *Visitors :*

Das-Gupta, Mr. C. C.

Husain, Mr. S. Wajahat

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of eleven presentations of books, etc., which had been placed on the table for inspection.

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(4) Shifa-ul Mulk Hakim S. M. Siddiq (An Ordinary Member, 1925).

The General Secretary reported that, in accordance with Rule 45, the Council submit for confirmation, the following change in the constitution of the Council, made in one of the Council Meetings, held since the last Ordinary Monthly Meeting :—

*Member of Council.* The Hon'ble Sir B. L. Mitter, K.C.S.I. *vice* Sir C. C. Ghose, resigned.

The appointment was confirmed.

The following papers were read :—

1. K. P. CHATTOPADHYAY and N. K. BASU.—*The Māṇḍā Festival of Chota Nagpur.*

Description of the Māṇḍā festival based on data as collected by the authors in 1924.

Description of the ceremonial, origin, the deothān, the deity ; the festival, dress, dances, the Charkhi ; the priests.

From a close study of the festival, it has become clear that the Māṇḍā festival is similar to the Grahaharan and Chaḍak festivals of Bengal, and from the point of view of culture contact important similarities and divergences are noticed.

2. C. C. DASA GUPTA. —*The Viśvanātha Temple at Maribau, Rewa State, C.P.*

Location. Description : basement, tower, the architectural portion in two parts (the door with the façade, Jagamohana, and the main shrine, Vimāna), sculptures on the upper storeys of the basement. Discussion regarding the age. Lack of inscriptions.

*Conclusion* : The temple should in all probability be assigned to the 9th century A.D., two centuries earlier than the Kaṇḍārya Mahādeva temple.

3. A. K. MITRA. *The Mauryan Lāts or Dhvaja Stambhas. Do they constitute an independent Order ?*

An analysis of the Mauryan pillars standing in the open, the so-called lāts, has been made in this paper with a view to find out whether there is a unity of proportion determining the mutual relations of their parts. Distribution and enumeration. Foundations.

Morphology of the pillars. Division of the pillar into three parts, the base, the shaft, and the capital. The crowning sculptures, ornaments. Measurements of the pillars found in different parts of India. Criticism of the measurements taken by Sir Alexander Cunningham and other officers of the Archaeological Survey of India. Results of the author's measurements of the pillars.

*Conclusion* : The variability as regards proportions and morphology is explained best by the hypothesis that Mauryan architecture did not start with a rigid canon. The heterogeneous elements which can be recognized in the Dhvaja pillars are in the first instance assembled together and welded into an organic type by the creative genius of the Mauryan architect, a type destined to persist, it is true with modifications, for nearly a millennium.

4. E. F. O. MURRAY. *The ancient Workers of Western Dhalbhum.*

The Dhalbhum Pergannah, which forms the most easterly portion of the Singbhum District of Chota Nagpur, has long



been noted for the multiplicity of ancient workings that occur therein. It has an area of nearly 1,200 miles through which the copper belt runs roughly south-east and north-west for a distance of over 50 miles.

Description of the country. Ethnographical survey of the inhabitants. Geology of the district. Copper remains. Shrines. Description of the relics found in the shrines. Gold workers of Dhalbhum.

Evidences available regarding the ancient workers of Dhalbhum: (1) Coins of the 3rd to 5th centuries A.D. near Ruamgarh; (2) tradition and history; (3) Ruamgarh and remains of shrines; (4) burial urns and other pottery; (5) beads; and (6) neolithic and palæolithic tools.

Jain and Chinese connection with Dhalbhum. Resemblances of the terra cotta, beads, etc., found at Bonidi with those recently unearthed at Ur and at Mohenjo Daro.

*Conclusion:* The ancient civilizations that existed at Ur, Harappa, and Mohenjo Daro seem to have many features in common that can only have originated through intercourse, and time may prove that these influences extended further eastwards than has been thought.

5. S. WAJAHAT HUSAIN.—*Kitāb al-Askhiyā' of ad-Dāraqutnī.*

Among the valuable Manuscript works preserved in the Khuda Bakhsh Oriental Public Library, Patna, the author came across a Manuscript named *Kitāb al-Askhiyā'* (No. 372, Vol. V, Ar.M. 82). It is a unique treatise on *Hadīth*, dealing with the excellence of generosity, written by famous traditionist, ad-Dāraqutnī (died A.D. 995). As far as the author has been able to gather from the various catalogues of Arabic Manuscripts prepared in India, Europe and other places, no other copy of the book is available elsewhere. Accordingly he has attempted to present the students of *Hadīth* with a critical edition of this valuable work giving reference wherever possible to the sources of the texts, and other important points on the subject.

The author also gives a detailed note on the life and work of ad-Dāraqutnī in Arabic together with an English summary.

6. M. SAYEEDUD-DIN.—*Some of the common flowering Plants of the Hyderabad State. Their Distribution, economic and medicinal Importance.*

An attempt to collect and identify the chief plants of the Hyderabad State has enabled the author to record some of the plants found either under cultivation or growing wild in the Hyderabad Dominions. Attention has been mainly directed to the city environs and towards Pakhal, a talukha of the Warangal District of Hyderabad. The Pakhal forest extending over miles, provides a diversity of plant life. Altogether 304 species belonging to 63 families of Dicotyledons have been

described, out of which about 206 are of medicinal value, and most of these are also of economic importance.

7. K. M. ASHRAF. —*Life and Conditions of the People of Hindūstān from 1200–1550 A.D., mainly based on Muslim Sources.*

An attempt is made in this thesis to give a sketch of social life in Hindūstān (Northern India) under the Muslim Sultāns of Delhi before Akbar. The plan of treatment is as follows:— After an introductory chapter dealing with the scope and the sources of study of the subject, three chapters are devoted to some socio-political factors, namely, the theory of Muslim sovereignty (or the 'Sultanate'), the personality of the monarch, the various classes. This is followed by three chapters on some aspects of economic life, namely, rural life, industry and commerce and the standards of life of various classes. Social life is treated in four chapters dealing with domestic life, social and domestic comforts, amusements and recreations, and manners respectively. In conclusion, some remarks are added to help a proper appreciation of the course of social developments during the period.

For the collection of the data copious materials scattered in various Arabic, Persian and Nagari originals have been used, together with such others as were available in translations. This comprises a survey of general and special histories, accounts of travellers, books of poetry, folklore and fiction, legal compendiums, mystic literature and compilations on ethics, politics and various practical arts, without, however, exhausting the range of the materials.

The interest of such a study lies in examining the social inter-actions of Hindus and Muslims during the first period of their contact in Northern India and in providing a proper background for the study of the later social developments. Where necessary, evidence has been checked by a comparison with examples from Akbar and from present-day survivals.



AUGUST, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 6th, at 5-30 p.m.

PRESENT :

L. L. FERMOR, Esq., O.B.E., A.R.S.M., D.Sc., F.G.S., M.Inst.M.M., F.R.S., F.A.S.B., President, in the Chair.

*Members :*

Bose, Mr. M. M.  
 Brahmachari, Sir U. N.  
 Chatterji, Mr. P. P.  
 Chopra, Dr. B. N.  
 Darbari, Mr. M. D.  
 Daver, Mr. N. S.  
 Dutt, Dr. Nalinaksha

Ghose, Mr. T. P.  
 Haq, Mr. M. Mahfuz-ul  
 Heron, Dr. A. M.  
 Hobbs, Mr. H.  
 Hora, Dr. S. L.  
 Jain, Mr. C. L.  
 Maheu, Mr. Johan van  
 Rahman, Mr. S. K.

*Visitor :*

Mullick, Mr. M.

The Minutes of the last Meeting were read and confirmed.

The General Secretary reported receipt of thirteen presentations of books, etc., which had been placed on the table for inspection :—

The following candidates were balloted for for election as Ordinary Members :—

(24) *Mullick, Manick Lall*, Land-holder, 123, Grey Street, Calcutta.

Proposer : M. M. Bose.

Seconder : Sir U. N. Brahmachari.

(25) *Ray, Karmajogi*, Sahityaratna, Land-holder, Government Contractor, Merchant and Agent ; Proprietor, K. Ray & Co., Landing Shipping Agency, 17A, Brindaban Paul Lane, P.O. Shambazar, Calcutta.

Proposer : M. M. Bose.

Seconder : A. M. Heron.

(26) *Husain, Syed Ata*, M.A. (Cal.), C.E. (Roorkee), Retired Superintending Engineer, Hyderabad State. Lingumpally, Hyderabad, Deccan.

Proposer : M. Hidayat Hosain.

Seconder : M. Mahfuz-ul Haq.

(27) *Rao, U. Shanker*, Bengal Pilot Service, 83, Chowringhee, Calcutta.

Proposer : Sir B. L. Mitter.

Seconder : S. L. Hora.

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(5) P. K. Kurup (An Ordinary Member, 1929).

Under Rule 65, the Chairman called upon members present who had not yet sent in a voting paper on the questions relating to the proposed application for a Royal Charter by the Society and who were desiring to do so to fill in a voting paper before the count of the votes.

No additional votes were given.

The Chairman requested the General Secretary to report on the voting papers received.

The Chairman in accordance with Rule 65, appointed Messrs. H. Hobbs and A. M. Heron to be scrutineers and to report to the meeting.

The following papers were read :—

1. EKENDRANATH GHOSH. —*An experimental Study on the Asphyxiation of some air-breathing Fishes of Bengal.*

In view of the marked difference of opinion in reference to the asphyxiation of some common fish of Bengal, the author conducted a few simple experiments to clear up some of the disputed points. The results of his observations are recorded in this paper.

2. SANANKA SARKAR. *The social Institutions of the Malpaharias.*

An account of the social institutions of the Malpaharias. Location of the people. Physical characteristics. Social groupings. Society. Crimes. Government. Kinship system. Relationship table. Birth customs. Name giving. Marriage customs. Death and funeral rites.

3. N. MIRANOV. *The Saddharmapaundarika ; a collection of Central Asian Manuscripts of the Lotus of the true Law.*

The investigation of Central Asian sites (Turfan, Kucha, Khotan) by various scholars has brought to light a considerable amount of manuscripts of the 'Lotus' which are not only older (5th–7th centuries A.D.) than the Nepalese ones (9th century and later), but also nearer to the Chinese versions. The author has studied the different sets of those Central Asian Manuscripts in his paper 'Central Asian recensions of the Saddharmapundarika' (J.R.A.S., 1927, pp. 252–274).

The author distinguishes, according to the script, two groups of manuscripts :— (1) those in the *Upright Gupta* Script and (2) those in the *Calligraphic Upright Gupta* Script.

From the comparison of different sets with other Central Asian Manuscripts and with the Indian epigraphic monuments, the author assigns the first group to the 5th–6th centuries and the second one to the 7th century. A comparison with Chinese versions permits to assign the recension of the text represented by the 1st group to the 3rd century A.D. and the text of the Calligraphic Upright Manuscripts to the 6th century. Up to the present chiefly manuscripts of the latter group have been published or made use of (like the manuscript of the Bibliotheca Buddhica Edition studied by Kern), those of the first one are comparatively little known.

The present collection contains the remains of *three* manuscripts in the Upright Gupta Script, whereof one (A)—12 N° N° (25 Fragg.) belongs to the oldest stratum (middle of the 5th century), while the two others (B and C)—20 N° N° or 31 Fragg.) are slightly younger going back to the 6th century. The

manuscript in the Calligraphic Upright Gupta (D) is represented but by 2 N° N° (=7 Frgg.).

The author has added, in an appendix, the edition of five Frgg. of the 'Lotus' from the Stein Collection (India Office Library, London) of which two (S. I, S. II), written in the Upright Gupta Script, are three almost complete leaves, while the rest are important from the literary point of view, giving nearly the same text as some Frgg. of the Otani Collection.

The author has, in his paper emphasized the far-going deviations of the Central Asian recensions, as far as the language is concerned. The manuscripts in the Upright Gupta Script are written throughout in mixed or Buddhist Sanskrit, i.e. represent a Prakrit base overlaid with a faint Sanskrit varnish. Considering the importance of this form of speech of which no Buddhist text is free, the author has compiled a grammar of his texts dealing with both the Phonology and Morphology; he has tried to assign the proper place among the Prakrit languages to the dialect to which Buddhist Sanskrit goes back. Such a grammar will be useful to any student of Buddhist literature, a systematic treatise on the subject being badly lacking. Our present knowledge of Buddhist Sanskrit is confined to a few accidental notes in the editions of Buddhist texts (not to speak of Rajendralala Mitra's work of the early eighties which is out of print).

The following exhibit was shown and commented upon :—

1. JOHAN VAN MANEN.—*An interesting and rare Artifact found in the Jungle in the Ho Country.*

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman called upon the scrutineers to report and announced the results of the voting as follows :—

*Proposal (a) :—*

*That the Society do make an application for the receipt of a Royal Charter for the incorporation of the Society.*

Total voting papers received	..	..	138
Rejected as not in order ..	..	..	1
In favour of the proposal	..	..	131
Against the proposal ..	..	..	5
Blank ..	..	..	1

*Proposal (b) :—*

*That the application do contain the request that the Charter may be granted under a name and style preserving the elements of the present name together with an indication of the All-India character of the Society, as for instance a name of the type of*

*' Asiatic Society of Bengal, Royal Asiatic Society of India ' with such variations as the Authority granting the Charter may require.*

Total voting papers received	..	..	138
Rejected as not in order ..	..	..	1
In favour of the proposal	..	..	118
Against the proposal ..	..	..	10
Blank	..	..	9

*Proposal (c) :—*

*That the Council be hereby authorised to make the necessary consequent alterations in the existing Rules of the Society if and when the Charter be granted.*

Total voting papers received	..	..	138
Rejected as not in order ..	..	..	1
In favour of the proposal	..	..	128
Against the proposal ..	..	..	8
Blank	..	..	1

The President explained that the result of the vote was that the Council had been given power to proceed with the application on the basis of the three points formulated in the voting paper. The very first step now to be taken would be to ask for advice in authoritative quarters as to how to proceed and how to formulate the request. The result of the voting would be placed before the advisers and the ultimate application formulated in accordance with the advice received.

The Chairman, on report of the scrutineers, declared all proposals duly passed.

The Chairman announced, that unless previous notices to the contrary were received, Monthly Meetings would be held during the recess months of September and October.

The President raised the question as to how to make the Monthly Meetings of the Society more attractive and interesting and suggested that an endeavour might be made to induce scholars to communicate in the meetings of the Society preliminary results of their investigations and to make interesting exhibits of novelties from time to time, apart from the question of subsequent publication of the fully worked out results.

An animated discussion ensued in which Sir Upendra Nath Brahmachari, Dr. S. L. Hora and the General Secretary took part.

In the course of the discussion it was suggested that a periodical report of the meetings containing an abstract of papers received, communications made, or exhibits shown might be issued between the meetings to all members so as to keep them in closer touch with the activities and current affairs of the Society. Another suggestion made was that this report might publish questions addressed to the Office or Officers of the Society in order to find a wider circle of experts who might

be in a position to contribute suitable replies. The opinion of the meeting was decidedly in favour of such a measure as suggested.

### SEPTEMBER, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 3rd, at 5-30 P.M.

#### PRESENT :

L. L. FERMOR, Esq., O.B.E., A.R.S.M., D.Sc., F.G.S., M.Inst.M.M., F.R.S., F.A.S.B., President, in the Chair.

#### Members :

Bogdanov, Mr. L.  
Brahmachari, Sir U. N.  
Chakravarti, Mr. Chintaharan  
Chatterji, Dr. S. K.  
Driver, Mr. D. C.  
Heron, Dr. A. M.  
Hora, Dr. S. L.

Hosain, Dr. M. Hidayat  
Krishnan, Dr. M. S.  
Manen, Mr. Johan van  
Mukherjee, Dr. J. N.  
Olpadvala, Mr. E. S.  
Prashad, Dr. Bami  
West, Mr. W. D.

#### Visitors :

Auden, Mr. J. B.  
Datta, Mr. J. M.  
Fermor, Mrs.

Iyer, Mr. L. A. N.  
Lahiri, Mr. H. M.  
Misoh, Dr. Peter  
Sondhi, Mr. V. P.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of eleven presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members :—

(28) *Vyas, Braj Mohan*, B.A., LL.B., Executive Officer, Municipal Board, Allahabad.

Proposer : M. D. Darbari.

Seconder : M. Mahfuz-ul Haq.

(29) *Asghar, Syed Ali, Musavi-Kazmi*, Property Holder, Qayam Manzil, 39 B, Iron Gate Road, Garden Reach, Calcutta.

Proposer : M. Hidayat Hosain.

Seconder : M. Mahfuz-ul Haq.

(30) *Ledrus, Michael*, Professor in Divinity, Lecturer at the Gregorian University, Rome; Member of the Society of Jesus; Editor, 'The New Review'; St. Xavier's College, 30, Park Street, Calcutta.

Proposer : Most Rev. F. Perier, S.J.

Seconder : Johan van Manen.

(31) *Auden, John Bicknell*. M.A. (Cantab.), F.G.S., Assistant Superintendent, Geological Survey of India, 27, Chowringhee, Calcutta.

Proposer : L. L. Fermor.

Seconder : W. D. West.

(32) *Krishnan, K. S.*, D.Sc., Mahendralal Sircar Professor of Physics, Indian Association for the Cultivation of Science, 210, Bowbazar Street, Calcutta.

Proposer : L. L. Fermor.

Seconder : M. S. Krishnan.

(33) *Ow-Wachendorf, Baron W.*, German Consul General, Minister Plenipotentiary, German Consulate General, 3, Lansdowne Road, Calcutta.

Proposer : L. L. Fermor.

Seconder : Johan van Manen.

(34) *Ulser, M. E. M. M.*, Consul General for Belgium, 9, Pretoria Street, Calcutta.

Proposer : L. L. Fermor.

Seconder : Johan van Manen.

(35) *Soudhi, Ved Pall*, M.Sc., F.G.S., Assistant Superintendent, Geological Survey of India, 27, Chowringhee, Calcutta.

Proposer : L. L. Fermor.

Seconder : S. L. Hora.

(36) *Couchman, Harold John*, Brigadier, D.S.O., M.C., Surveyor-General of India, Survey of India, 13, Wood Street, Calcutta.

Proposer : L. L. Fermor.

Seconder : A. M. Heron.

The General Secretary reported receipt of news of the death of :—

Le R. P. Henri de Pirey, a Corresponding Member of the French School of the Far East, Hanoi.

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(6) Mohammed Musa (An Ordinary Member, 1925).

(7) A. C. De (An Ordinary Member, 1932).

(8) T. Leslie Martin (An Ordinary Member, 1924).

(9) J. N. Mukherjee (An Ordinary Member, 1924).

The following paper was read :—

1. JATINDRA MOHAN DATTA.—*On a Type of sedentary Game in Bengal.*

One of the most popular games of children in Bengal is described. At Asansol and Dhanbad it is known as *Tuk-tak*, but in Calcutta the game is commonly called *Lau Kāṭā Kāṭi* or simply *Kāṭā Kāṭi*. It is played by two players.

In a note Dr. S. L. Hora discusses the relationships of the game.

Dr. Hora referred to the great popularity of the game among school children in Calcutta and remarked that in India all sedentary games are believed to be hobbies of idle people. Children are, as a rule, dis-



couraged to play these games. He mentioned certain popular beliefs and superstitions regarding such games.

The following exhibits were shown and commented upon :—

1. L. L. FERMOR.—*Exhibition of four Specimens of Deccan Trap Basalts and Dolerites from the Chhindwara District, Central Provinces.*

In 1916 Dr. Fermor and Dr. Fox published an account of the basaltic lava flows of Deccan Trap age near Linga in the Chhindwara District, Central Provinces,<sup>1</sup> with a map showing the distribution of five separate lava flows. The paper also included an account of the mode of occurrence of these flows, and the earth movements that had affected them since their extravasation. An account of the chemical and petrographic characters was left for publication at a future date.

Specimens representing four of these flows, specially selected at the time for the purpose, have now been analysed, and the results show the value of analysis upon carefully selected specimens of rocks. Although of the four specimens analysed two are basalts and two are dolerites, and although they represent four different flows, yet the analyses are so astonishingly similar that the average of the four might at first sight be taken to represent any one of the four flows. There are, however, subtle differences and when from these analyses the standard mineral composition or norm of each rock is calculated, it is found that there is a definite change in composition from the lowest or earliest flow to the upper or highest of the four flows. From the norms it is seen that the direction of change is increasing alkaline feldspars, increasing total feldspars, and increasing total pyroxenes, with decreasing total iron-ores from the lowest to the highest flow.

Some years ago the late Dr. H. S. Washington published the results of a study of 10 analyses of Deccan Trap lavas from various parts of India. These analyses can be grouped into those that represent the lower division of the Deccan Traps to which the lavas of Linga in the Chhindwara District belong, and those which probably belong to the Upper Traps. On grouping Washington's analyses in this way, and on comparing those of the Lower Traps with those of the Upper Traps, it is seen that the general difference between the composition of the Lower Traps and composition of the Upper Traps as represented by their norms is similar in direction but much larger in degree than that shown by the four specimens from Linga. From this it may be deduced that the tendency to change or magmatic differentiation illustrated by the lavas of Linga on a small scale is an epitome of that generally applicable to the lavas of the Deccan Trap series as a whole.

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<sup>1</sup> *Rec. Geol. Surv. Ind.*, XLVII, pp. 81-136 (1916).

Should further work confirm the general character of the differences between the Upper and Lower Traps, it should be possible from a study of analyses to indicate the position in the series occupied by rocks from outlying localities. By this method it is suggested, for instance, that the Deccan Trap of Rajahmundry in the Madras Presidency, which is over 200 miles from the nearest Deccan Trap exposure, belongs in all probability to the Lower Traps.

Mr. Van Manen asked what were the definition and the derivation of the word 'Trap' as applied to the Deccan Trap formation.

Dr. Fermor replied that the word 'Trap' was derived from the Swedish word 'Trappa' meaning stairs, and referred to the manner in which the horizontally-bedded lava flows gave rise on weathering to terraced or step formations. Because these traps were usually basic in composition like basalt, the word 'Trap' had later become extended to many forms of basic rock occurring otherwise than as lava flows. Such extension was, of course, strictly speaking, incorrect.

Dr. J. N. Mukherjee wished to know whether the black cotton soil was always found in the localities where the basaltic lava flow from the Deccan Trap was found.

The speaker replied that there is indeed a close association of this soil with the Deccan Trap.

## 2. M. S. KRISHNAN.—*The Bahjoi Meteorite Iron.*

Among iron meteorites only a comparatively small number (less than 50) have been actually observed to fall. Great interest therefore attaches to the specimen which was recovered from a fall on the 23rd of July, 1934, between 9 and 10 P.M. at Chandankati Muazam in Bahjoi P.S., Moradabad District, U.P. This was actually picked up by cowherds on the morning of the 25th July. It has the usual battered appearance, produced by a series of shallow depressions on the surface, characteristic of this class, and is roughly triangular in shape, measuring 12" x 10" x 9" with a maximum thickness of 2½ inches. By the time the Geological Survey of India could write and ask for the specimen to be sent, it had been cut into two pieces right across the middle. These two pieces as received, weighed 5527.32 grams and 4795.22 grams respectively (10322.54 grams on the whole). The meteorite shows a few small patches of yellow metallic mineral which is probably troilite embedded in the main mass of nickel-iron. A description of the meteorite is under preparation.

Dr. Fermor said that this fall of a meteoric iron in India was of great interest, because of the rarity of irons actually seen to fall. In Museums there were roughly as many iron as stone meteorites, but whereas the iron meteorites were the accumulation of centuries owing to the ease with which they resisted weathering especially in dry climates, stone meteorites were rarely recovered unless seen to fall and collected at the time of fall. Although there were over 100 meteorites known from India, only 4 of these were irons, and the rest were stone meteorites. The iron meteorites hitherto found in India were Nedagolla, Kodaikanal, Lodhran and Samelia, of which all were seen to fall except the Kodaikanal meteorite. The Samelia fall in Rajputana took place as recently as 1921.

Mr. Van Manen enquired where these extra-terrestrial visitors to India came from.

Dr. Krishnan replied that because of their resemblance to some parts of the earth, they are considered to be essentially fragments of the solar system still moving in inter-planetary space, some occasionally travelling near enough to be attracted by our planet.

Dr. Fernor, supplementing Dr. Krishnan's remarks on this point, observed that there are three principal hypotheses concerning the source from which meteorites came. It was generally accepted that iron meteorites represented the core of some celestial body and the stony meteorites represented the stony crust. On this view one had to suppose that they had been derived from a pre-existing stellar body with a solid crust. One view was that the solar system was derived from the tidal disruption—due to near approach of another stellar body—of a primordial sun, of which the crust had become solid, and that the material torn off the surface of the sun, thereby exposing its hot interior, the present sun, was collected into the planets as the disturbing body moved on, and the sun regained its gravitational control. Some fragments are still ungarnered, and these are the meteorites which fell periodically on the earth.

The second hypothesis derives the meteorites from the earth. This is the hypothesis that supposes that the moon left the earth after the crust had become solid and that the meteorites are stray fragments of the portions of the earth's crust that were thrown into the sky and had not yet been collected either into the moon or into the earth.

The third hypothesis supposes that the meteorites have been shot out in the past from the volcanoes of the moon.

The speaker favoured one of the first two hypotheses as the more probable.

### 3. M. S. KRISHNAN. —*The Khanpur Meteorite.*

Meteoric stones fell at Khanpur ( $25^{\circ} 33' 30''$ ;  $83^{\circ} 7' 30''$ ) and the surrounding villages within a radius of about  $2\frac{1}{2}$  miles situated around the junction of the Ghazipur, Jaunpur, and Benares Districts of the United Provinces on 8th July, 1932 between 12 noon and 1 P.M. Eleven pieces were recovered from ten different villages. The total weight of these is 3248.20 grams, the two largest pieces weighing 1312.13 and 779.14 grams respectively. The meteorite is a white chondrite (C'wb of Brezina's classification) containing enstatite and olivine with some specks of troilite. Most of the pieces show a thin black fused crust on the surface with ill-marked flow lines. The Sp. Gr. of the different pieces varies between 3.256 and 3.466. A description of this fall has recently been published in the *Records of the Geological Survey of India*, Vol. LXVIII, pp. 107-114 (1934).

Dr. J. N. Mukherjee asked whether cobalt was also present along with Se. and Ni. If so, in what percentages?

Dr. Krishnan replied that nickel is present in large quantities, up to about 15%, and cobalt in very small quantities. Concerning selenium which, if present, would be so in very small quantities, he preferred for the moment not to express himself in the absence of satisfactory analyses.

### 4. S. L. HORA.—*Sun-shades for Fishes.*

In the July issue of the American magazine entitled 'The Aquarium', it is pointed out that even tropical fishes need

protection against high temperatures during the hot summer months, and readers are advised to provide extra shade if their aquaria happen to be in an exposed place where the temperature of water can rise to 90°F. or higher.

It is of interest to note that in Bengal regular, extensive, sun-shades are constructed over shallow ponds and tanks to protect fishes during the hot and dry months, from April to June. In the case of *Nuna tengara* (*Mystus gulio*) baskets are covered with bundles of paddy straw to keep the fish cool.

Photographs of sun-shades for fishes were exhibited.

Dr. Prashad complimented the fishermen of Bengal on the ingenious devices used by them for the care of fishes in tanks, etc., and gave several instances. He further remarked that there is no doubt that during hot summer months fishes prefer shady places and this habit is exploited by anglers to considerable advantage.

In reply to some remarks by Mr. Datta, Dr. Hora pointed out that all small country boats are provided with a cover to serve as shelter for boatmen. The boats used for transporting *Jiol Machh* have a fixed cover at one end, while the rest of the boat can be covered, when needed, with loose covers in sections. No other special arrangement was noticed in the boats that come to Calcutta.

Fish baskets are first covered with a flat, shallow basket to prevent the fish from jumping out and then bundles of paddy straw are put on the cover to provide fishes with additional shade. By this device the water round about the fishes remains sufficiently cool and the fish are protected from the burning heat of the sun.

5. SUNITI K. CHATTERJI.—*Three Small Bronzes from West Africa.*

These three bronzes come from the Gold Coast (probably Ashanti) and were obtained by the exhibitor from Paris two years ago through the kind offices of the Curator of the Musée Guimet who assisted him in purchasing them. These figures were used as weights to measure gold dust. One of them is that of some bird, a turkey or cock, highly stylised; the second is that of a seated personality, the collar of beads round the rather elongated neck suggests that it is of some woman, possibly some chieftainess; and the third one is a replica of a mask. All the three are genuine specimens of the native art of the true Negroes of West Africa, among whom metal work attained a very high state of excellence (particularly among the Bini of Benin in Southern Nigeria).

6. JOHAN VAN MANEN.—*Three China Plates representing the three famous Buddhist Pilgrims.*

On account of the lateness of the hour this exhibit was postponed till next meeting.

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman announced that a meeting of the Medical Section had been arranged to be held on Tuesday, the 4th

September, at 6 P.M., when Lt.-Col. R. Knowles, I.M.S., would read the following papers :—

1. *Mosquito Density and Mosquito-borne Diseases in Calcutta City.*
2. *Nuclear Division in Malaria Sporozoites.*

The Chairman announced that a course of four general lectures had been arranged to be held in the Society's Hall, of which the first one was already over on last Friday, 31st August, at 6-15 P.M. (Dr. S. L. Hora on 'Trade in live Fish (*Jiol Machh*) in Calcutta').

*Friday, August 31st, at 6-15 P.M.*

Lecturer: Dr. S. L. Hora, D.Sc., F.R.S.E., F.L.S., F.Z.S., F.A.S.B.  
Subject: Trade in Live Fish (*Jiol Machh*) in Calcutta.

#### *Synopsis.*

The trade in 'Live Fish' is very old in Bengal and attention was directed to the mode of conveyance of the fishes in olden times. The bionomics of the various species grouped as *Jiol Machh* were referred to briefly and all aspects of the present-day trade from the towing of the boats to Calcutta to the final disposal of fish in homes were described. The various types of measures and baskets used in this trade were illustrated. Reference was made to the great commercial value of these fishes and the necessity of improving the trade was indicated. Statistics were given regarding the trade in 'Live Fish' in Calcutta and a few remarks were made on the earning and mode of life of the fishermen engaged in this trade. Illustrated by lantern slides.

The remaining three lectures would be as below :—

*Friday, September 7th, at 6-15 P.M.*

Lecturer: J. B. Auden, Esq., M.A., F.G.S.

Subject: The North Bihar Earthquake of the 15th January, 1934.

#### *Synopsis.*

The lecture summarised the results of an investigation in the field of Mr. Wacha, Dr. Dunn, Mr. Ghosh, and the lecturer. The description of the severe damage caused by the earthquake regarded two main zones: firstly, the central zone represented by the epicentral tract and the slump belt; secondly, the bordering Patna-Monghyr belt and the Valley of Nepal. A brief discussion of the more general effects of the earthquake, such as emission of sand and water, landslides, etc., was followed by an account of the possible causes, comparison being made with other recent Indian earthquakes. Finally, the lecture ended by discussing the time of the earthquake as deduced by seismographic records, and the question of future immunity in Bihar. Illustrated by lantern slides.

*Saturday, September 15th, at 6-30 P.M.*

Lecturer: Dr. Meghnad Saha, D.Sc., F.R.S., F.A.S.B.

Subject: The fundamental Constituents of Matter.

#### *Synopsis.*

The lecture described discoveries of the Electrons and the recent discoveries of the Positrons and the Neutrons. It also dealt with the probable existence of other probable fundamental particles as Dirac's Free Magnetic Poles and the probable effect of their existence on our views regarding the electro-magnetic origin of mass and in addition

with the nature of cosmic rays, the probable existence of a world of anti-atoms, and also certain other cosmological problems of fundamental importance. Illustrated by lantern slides.

*Friday, September 21st, at 6-15 P.M.*

Lecturer: Dr. M. R. Sahni, M.A., D.Sc.

Subject: The Shan Hinterland: the Country and its People.

*Synopsis.*

The speaker gave a talk on the prolific and amazing variety of tribes inhabiting the Shan States of Burma and dealt briefly with their geographical distribution, their more interesting customs and traditions.

The lecture was illustrated by lantern slides and exhibits collected locally.

The Chairman invited the members present to communicate with the Society's office the names and addresses of non-members to whom they wished invitations to the lectures to be issued.

# NOVEMBER, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 5th, at 5-30 P.M.

## PRESENT :

L. L. FERMOR, ESQ., O.B.E., A.R.S.M., D.Sc., F.G.S., M.Inst.M.M., F.R.S., F.A.S.B., President, in the Chair.

## Members :

Agharkar, Dr. S. P.  
Bogdanov, Mr. L.  
Brahmachari, Sir U. N.  
Brown, Mr. Percy  
Chakravarti, Mr. C.  
Darbari, Mr. M. D.  
Dikshit, Mr. K. N.  
Driver, Mr. D. C.  
Heron, Dr. A. M.

Hora, Dr. S. L.  
Hosam, Dr. M. Hidayat  
Krishnan, Dr. M. S.  
Manen, Mr. Johan van  
Ow-Wachendorf, Baron W.  
Siddiqi, Dr. M. Z.  
Sondhi, Mr. V. P.  
Wadia, Mr. D. N.  
West, Mr. W. D.

## Visitors :

Aiyengar, Mr. N. K. A.  
Bhattacharji, Mr. D.  
Chhabra, Dr. B. Ch.  
Day, Mr. A. K.  
Gee, Mr. E. R.

Giskra, Baroness  
Gregory, Mr. W.  
Lahuri, Mr. H. M.  
Ow-Wachendorf, Baroness  
Row, Mr. P. C.

Vankatsami, Mr. M. S.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of eleven presentations of books, etc. which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members : —

(37) *Chanda, Apurea Kumar*, M.A., I.E.S., Offg. Director of Public Instruction, Bengal, Writers' Buildings, Calcutta.

Proposer : J. N. Mukherjee.

Seconder : Suniti Kumar Chatterji.

(38) *Hosain Bahadur, Prince Afsarul Muluk Mirza Muhammad Akram*, Political Pensioner and Landholder, Afsar Manzil, 20, Ballygunge Circular Road, Calcutta.

Proposer : L. L. Fermor.

Seconder : Johan van Manen.

(39) *Dey, Mukul*, A.R.C.A. (Lond.), M.C.S.E., etc., Artist and Author, Principal, Government School of Art, 28, Chowringhee, Calcutta.

Proposer : L. L. Fermor.

Seconder : Suniti Kumar Chatterji.

(40) *Gee, Edward Rowland*, M.A. (Cantab.), F.G.S., Geologist, Geological Survey of India, 27, Chowringhee, Calcutta.

Proposer : L. L. Fermor.

Seconder : A. M. Heron.

The General Secretary reported the following loss of membership, since the previous meeting, by death :—

(4) Sir C. C. Ghose (An Ordinary Member, 1924).

(5) Kumar M. N. Mitra (An Ordinary Member, 1906).

(6) Ekendra Nath Ghosh (A Life Member, 1918).

The General Secretary announced the death of :—

Rev. E. Blatter, S.J. (The first recipient, Buhl Memorial Medal, 1932).

The General Secretary reported that the election of :—

(1) M. S. M. Sharma (elected on 5-3-34) had become null and void, under Rule 9.

In accordance with Rule 38, the General Secretary announced that the names of the following Ordinary Members would be suspended as defaulters within the Society's building for the period of a month to be removed from the Society's registers for non-payment unless the amount due be paid before the next Ordinary Monthly Meeting :—

Jogesh Chandra Bose.

Harit Krishna Deb.

A. H. Ghuznavi.

M. S. Mani.

Sham Lal Kapur.

N. L. Kothari.

J. J. Mahudavala.

Vidyananda Swami.

M. H. Moledina.

R. Kimura.

Count K. Ohtani.

S. P. Sinha.

D. L. Clendenin.

P. K. Das.

Mohd. Amin Abbasi.

Raja K. Deb, Rai Mahasai.

The President called upon the General Secretary to read an obituary notice of the late Sir C. C. Ghose (*vide* page 190).

The following exhibits were shown and commented upon :—

1. JOHAN VAN MANEN.—*Six China Plates representing the three famous Buddhist Pilgrims.*

Genuine Chinese porcelain is as famous as its fakes are feared. India has in the course of its history absorbed a substantial amount of valuable specimens of Chinese ceramics, which come to light from time to time, and after the great European War Calcutta has become an important dispersion centre for old China, both genuine and spurious. The plates exhibited represent the three famous Buddhist Pilgrims, Fa Hsien, Hsüan Tsang, and I Tsing. The period mark gives the date of manufacture as that of Hsüan Ho, the one but last Emperor of the first Sung Dynasty, i.e. A.D. 1119. This is unbelievable, though some Chinese friends who have been consulted think the plates probably genuine. They are submitted for scrutiny by experts.

Mr. Van Manen said that the details on the plates were contrary to all rules laid down in the books on the subject. Pictorial representations did not occur on China-ware at so early a date as given by the date-mark. Also, at that early time no dates were given at all. Dates came into use at a later period. As to the probability of any porcelain or crockery persisting for so long a period, an interesting explanation was given by his Chinese friends. They explained that plates of this nature were only used once a year on the feast day of the pilgrims represented. After ceremonial use such plates are carefully stored away for the remainder of the year. Consequently the life of even such perishable objects might be long. The main question was to determine where and when such plates are or have been manufactured. Personally he thought them very attractive as objects of art.

Mr. Justice Gregory said—

The iron red plates with figures in mat black cannot, in my opinion, be assigned to the period marked on the base.

I think the plates were made for the Tibetan market. I may add that the drawing of the designs is much too tutored for the early period claimed for the dishes.

Mr. Percy Brown said --

While agreeing with Mr. Justice Gregory that the plates are not likely to have been produced in China, I am personally unaware of any place in Tibet (where Mr. Gregory thinks they might have been made) where pottery of any kind is prepared. On the other hand, there is a large region on the Chinese border of which we know little as to its industrial products and it is quite possible that the plates were made there under Chinese influence.

Dr. S. L. Hora referred to the case of an Indian Gentleman, now resident in London, who used to collect old China from the Calcutta bazaars. For his collection of plates, purchased for about Rs. 600, a wealthy American offered him Rs. 60,000, with the proceeds of which the seller went to London, purchased a house, and settled there. This would show the remunerative value of the hobby of collecting old China.

Mr. Van Manen replied that the theory of production in China for Tibet was one difficult to accept, as the Chinese pilgrims, depicted on the plates, are not venerated in Tibet. During the Thang dynasty (618-905 A.D.) the cult of these pilgrims arose and flourished, and representations



of a nature as shown on the plates began to be the subject-matter of painting and sculpture in China. A market for Tibet or for India for these productions was difficult to imagine. The problem of date and origin remained of interest and could not be taken as satisfactorily solved. He himself was not inclined to place faith in the early date given, but would like a more definite answer to the original question.

2. D. N. WADIA. --*Specimens of fossiliferous Limestone of eocene Age associated with volcanic Rocks at the Crest of the Great Himalaya Range, Burzil Valley, Kashmir.*

During the summer of 1934 fairly well preserved marine fossils of comparatively so young an age as the Eocene have been discovered in a belt of igneous rocks which traverse right across the central axis of the Himalaya—the range of mountains in the heart of the Himalaya known as the Great Himalaya range, which separates India from Tibet. These remains indicate that the Burzil area of Kashmir, barely 30 miles from Nanga Parbat, the culminating peak of the Punjab Himalaya, was occupied by an arm of the great sea, somewhat resembling the Bay of Naples of to-day, where a marine fossiliferous limestone is being deposited, intermingled with the products of volcanic eruptions, such as volcanic-ash, lava-flows, tufts, etc.

An additional interest is lent to the Burzil Eocene rocks by the fact of their relation to the large mass of the Astor granite. This granite occupies several hundred square miles of the mountains between Burzil and Astor, and the Eocene patch occurs as an island floating on the granite with numerous veins of the latter penetrating its strata. The post-Eocene age of this granite, therefore, is definitely established by this association and the fact constitutes an interesting feature in the geology of the Kashmir Himalaya.

Mr. Wadia, in exhibiting the specimens, said that the interest of the Burzil rocks lies in the unusual association of fossiliferous sediments with the products of volcanic eruptions and of plutonic rocks injected from deep-seated centres in the earth's crust. Two inferences arise from this observation:—

(1) That the identifiable fossils, belonging to the genera *Dictyocnoides* and *Orbitolina* definitely date the back-bone of the Himalaya range between Ladakh and Kashmir—the zone of mountains which must presumably have commenced its elevation at the earliest phase of the uplift—as Upper Cretaceous to Eocene.

(2) That the present-day alignment of the Great Himalaya Range of Kashmir is of quite recent origin. We all know that the Himalayas are a more or less effective ethnographic water-shed between India and the rest of Asia; that it is a less effective divide as a water-parting between India and Tibet, but geologists have always believed that the Himalayan axis separates two quite different geological provinces—the Tibetan zone of stratigraphy to the north of it from the Himalayan zone proper to the south. Although there have been noted one or two minor exceptions, no such flagrant example such as the present one is known in which a belt of strata, several miles in breadth, belonging to the Tibetan stratigraphic province, runs across the crest of the central axial range into the Himalayan zone denoted by the Kashmir sedimentary basin. The exception, however, is, I think, more apparent than real and may be explained by the fact that the original crest-line of the Great Himalaya Range of

Kashmir lies to the south of the Burzil valley, the present Indus watershed having been pushed further north during late geological times, Pleistocene or even later. Such northward shifting of the watershed line has been known in many parts of the Himalayas.

The age of the Himalayan granite has been a subject of debate among Indian geologists, various ages being assigned to it. A Tertiary age has been advocated by some authors since General McMahon's day. Absolute conclusive evidence has, however, been lacking in support of the Tertiary view. The Burzil occurrence gives conclusive evidence of the Tertiary period of a portion of the central Himalayan granite. The permeation of Eocene fossiliferous strata by the hornblende-granite (Astor granite) in which it occurs as a detached floating island, is a fact very clearly observed all along the border of the 'island'. These intrusions establish a post-Eocene age, at the earliest, for the Astor granite, which occupies several hundred square miles of the central Himalaya of Kashmir.

Dr. *Fermor* said that this evening the Society had had the privilege of an important announcement by Mr. Wadia. For many years the age of the central Himalayan granites has been a matter of discussion amongst geologists—a subject which was not yet settled owing to the absence, in most cases, of indisputable evidence. During the last season, however, Mr. Wadia had obtained indubitable evidence of intrusive relationship between a certain granite in Kashmir and fossiliferous rocks of Eocene, that is Tertiary, age. As a result of this discovery, he was able to state that the age at least of several hundred square miles of granite in the Kashmir Himalayas was Tertiary, and the Society took this opportunity of congratulating Mr. Wadia upon definitely establishing this important fact.

Mr. *West* thought that Mr. Wadia's observations, while clearly proving the age of that particular granite, a hornblende-granite, threw no light on the age of the well known Central Himalayan Gneissose Granite as suggested by the President. Although C. A. McMahon was of the opinion that the latter was Kainozoic in age, he was never able to produce any definite evidence, and the age of this rock is still unsettled. A hornblende-granite in the Mount Everest Region has been ascribed by Sir H. Hayden and Dr. A. M. Heron to a Kainozoic age, and it is probably similar in character and age to the granite described by Mr. Wadia. Both, however, are entirely different from the porphyritic muscovite-biotite-granite which extends from Garhwal to Nanga Parbat.

Mr. *H. M. Lahiri* asked Mr. D. N. Wadia if in view of the fact that the fossiliferous sedimentary rocks met with by him (Mr. Wadia) in the Central Himalayas occur as an island in the granite, it might be possible that the sedimentary beds were deposited on the eroded granite which latter would, in that case, be much older than the fossiliferous strata and not younger as thought by Mr. Wadia.

Mr. *Wadia* in his reply to Mr. Lahiri stated that the granite mass is found penetrating the sedimentary and volcanic rocks of Burzil.

To Mr. West he replied that the hornblende-granite of the area under description is different from the central gneiss of the Himalaya.

Dr. *Heron* said —

I should like to say, in connection with Mr. West's remarks, that in the Darjeeling district and Sikkim, the Darjeeling gneiss seems very probably to be a composite gneiss made up of schists of the Daling series injected along the foliation planes by porphyritic biotite-granite. This type of intrusion is characteristic of the old rocks, and of very deep-seated conditions of intrusion, whereas the other tourmaline and hornblende granites, supposedly Tertiary in age, to the north of the central range, occur in veins and sills. It is thus suggested that the two granites may be very different in age.

L. R. Wager, in his review of the geology in 'Everest, 1933', also puts forward the hypothesis that there are two granites (p. 320). He also makes the interesting suggestion (p. 335) that his Mount Everest Pelitic Series, Carboniferous in age or slightly older, is the equivalent of the Daling series. This, I think, is too great a jump in correlation to take with our present knowledge, and I should prefer at present to consider the Daling series as Precambrian, and as belonging to the Peninsula or Gondwana land.

Mr. D. Bhattacharji, in a written communication handed in at the end of the meeting, suggested the possibility that the granite described by Mr. Wadia might be a reconstituted granite of older age, the reconstitution being due to later tectonic movements aided by the body heat of the earth.

The following papers were read :—

1. L. BOGDANOV.— *The Quatrains of Jalālu-d-dīn Rūmī and two hitherto unknown Manuscripts of his Divān.*

The manuscripts of the Divān of Jalālu-d-dīn Rūmī which contain even a few of his quatrains are not very numerous. Those that include any appreciable number are comparatively rare. Copies of the Divān comprising a complete (or what may be considered as complete) collection of his rubā'is are in-existent in the great libraries of Europe and India. The discovery in Calcutta of a codex of the latter description and, simultaneously, in Northern India, of a fragment of a similar codex, by which a lacuna in the former is completely restored, is of great importance.

Review of our present knowledge concerning the quatrains of Jalālu-d-dīn. MSS. of the Divān in Europe and India. The Constantinople edition. The MS. in the private collection of Raja Bahadur Singh Singhi. Extent. The number of quatrains (1925) exceeds that of the Constantinople edition. The complete MS. known. Description of the MS. The MS. in the private library of the Hon'ble Nawwab Sadr Yar Jang Mawlana Habibur-Rahman Shirwani of Habibganj. Number of quatrains, 620. Description of the MS. Comparative table of quatrains in about 35 MSS. and editions. Total number of quatrains in all collections, 2206. Discussion on nature and metre of the quatrain. Nature of the 'collections' of quatrains. Authenticity of the Constantinople edition and of the new quatrains.

Dr. Fermor in inviting discussion upon Mr Bogdanov's paper remarked that in listening to Mr. Bogdanov he could not help comparing the work of the scholar researching upon ancient manuscripts with that of the geologist, who regards the crust of the earth as an ancient book in which the lessons are written in terms of fossils and minerals. In the present case Mr. Bogdanov, by his study of various manuscripts containing the Quatrains of Jalālu-d-dīn, appears to have attained nearer to completion in reconstructing the original document than was ever likely to geologists except in very rare cases.

Dr. M. Hidayat Hosain said—

Jalāl-ud-dīn Rūmī is the greatest Šūfī writer among Musalmans. Jāmi has called his Masnavī 'A Qur'ān in Persian'. I congratulate

Mr. Bogdanov with his success in the collection of Rūmī's Quatrains and when published they will be read with the greatest interest by all Persianists.

Dr. M. Z. Siddiqi asked—

Is there any common idea, or thought, between the Rubā'iyāt of Rūmī and those of Khayyām?

In reply Mr. Bogdanov said—

The quatrains of these two authors are, in my opinion, entirely different in their purpose and origin. Whilst the quatrains of our author are probably nothing more than a collection of his sayings, in which a mystical teaching was imparted by him to his disciples, and, as such, were taken down by his pupils without any additions or alterations, the quatrains of Khayyām were produced on the spur of the moment, during his hours of relaxation, and taken down not by pupils as a teaching, but by friends and admirers as things of beauty. This, in the course of time, resulted in Khayyām's quatrains becoming mixed up with quatrains by other poets ('The Wandering Quatrains'), whereas those of Jalālu-d-din Rūmī remained intact owing to their isolated position of rather a manual of Śūfism, than of a book of poetry.

2. B. CH. CHHABRA. —*Epigraphical Study of Expansion of Indo-Aryan Culture during Pallava Rule.*

The paper deals chiefly with the earliest Sanskrit inscriptions, in Pallava-Grantha characters, discovered in Ceylon, Malacca, Indonesia, and Indo-China. The author has made some important additions to and alterations in the existing readings, shedding thereby fresh light on the hitherto accepted interpretations and has, at the same time, seriously checked some theories based on what he holds to be misinterpretations. He has, for instance, adduced sufficient evidence against the belief held by some Dutch and French scholars that the expression *siddhayātrā*, occurring in certain inscriptions from Sumatra and Cāmpā, refers to a magic power. The short Cho-Dinh rock inscription is supposed to allude to human sacrifice, but the author does not agree with this view. He further identifies the name *Śrī-Viṣṇuvarman*, appearing on the cornelian seal found at Perak, with the name *Viṣṇu* which occurs on one face of the Ligor stèle inscription as the personal name of the Śailendra king figuring therein. Likewise, in the Chāngal inscription, offering a different explanation of the compound *puruṣapadamahālakṣmabhūte* and reading *-ṅāḍitīrthā-vṛtam* instead of *-ṅsāditivādhṛtam*, the author is convinced to have elucidated the difficult points in this inscription so as to necessitate a considerable change in the deductions made therefrom.

In conclusion, the author traces back, following the epigraphical evidence, the sources and extent of the influence which India exercised in those early days on the countries overseas, mainly with regard to her religion, art, and literature.

Mr. Van Manen congratulated the speaker on his important paper, and welcomed his first contribution to the Society. He expressed his gratification that in Dr. Chhabra another young Indian scholar has

joined the ranks of those Indians who after successful study abroad had come back to their motherland with a thorough knowledge of a continental language, in this case Dutch (not to mention a more common proficiency in German and French). Access to the extensive philological and archæological literature on ancient India in the Dutch language was a most valuable advantage.

He further drew attention to one aspect so strikingly demonstrated by the speaker : An expression was rendered by the speaker as a 'religious devotee', as against the rendering of French scholars a 'sacrificial victim'. This belonged to what might be called the anthropology of textual criticism. The time had almost come that the possible and allowable extent of variation of doubtful interpretation should be systematized and its philosophy formulated by definite and generally valid laws.

Mr. *Chintaharan Chakravarti* expressed a doubt—

The passage (*Śivo dāso badhyate*—*vandyate* as emended by Dr. Chhabra), the interpretation of which has been questioned by Dr. Chhabra, is really difficult to be explained. Does the emendation of Dr. Chhabra convey any satisfactory sense? Is it, if not the prevalent reading and interpretation, free from the defect of far-fetchedness?

Dr. *Chhabra* replied—

The word *dāsa* does not necessarily mean 'a slave'. It can also mean 'a servant', 'a devotee', or the like. We know of a king in Ceylon, who was named *Buddhadāsa*, who was contemporaneous with Bhadravarman, the king to whom the present record belongs. The word *Śivo dāsa* might perhaps be an attribute of that king.

He did not claim to have given a final solution and would like his emendation to be considered as a suggestion.

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.



#### DECEMBER, 1934.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 3rd, at 5-30 P.M.

#### PRESENT :

L. L. FERMOR, Esq., O.B.E., A.R.S.M., D.Sc., F.G.S.,  
M.Inst.M.M., F.R.S., F.A.S.B., President, in the Chair.

#### *Members :*

Agharkar, Dr. S. P.  
Audon, Mr. J. B.  
Bogdanov, Mr. L.  
Bose, Mr. M. M.  
Brahmachari, Sir U. N.  
Brown, Mr. Percy  
Darbari, Mr. M. D.  
Dikshit, Mr. K. N.  
Dods, Mr. W. K.  
Fox, Mr. C. S.  
Gee, Mr. E. R.  
Ghatak, Mr. J. C.  
Ghose, Mr. T. P.

Ghuznavi, Mr. J. S. K.  
Jenkins, Dr. W. A.  
Ledrus, Rev. M., S.J.  
Manon, Mr. Johan van  
Mukherjee, Dr. J. N.  
Olpadvala, Mr. E. S.  
Rahman, Mr. S. K.  
Rao, Mr. U. Shanker  
Ray, Dr. H. C.  
Rossetti, Mr. F. F. L.  
Vero-Hodge, Mrs. E. H.  
Wadia, Mr. D. N.  
West, Mr. W. D.

*Visitors :*

Chhabra, Dr. B. Ch.  
Fermor, Mrs.

Gladstone, Mr. John  
Majumdar, Mr. B. R.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of seven presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members :—

(41) *Haque, The Hon'ble Khan Bahadur M. Azizul*, Education Minister, Government of Bengal, 12, Rawdon Street, Calcutta.

Proposer : L. L. Fermor.  
Seconder : Johan van Manen.

(42) *Remfry, The Hon'ble Mr. Justice Charles Oliver*, B.A., LL.B. (Cantab.), Barrister-at-Law, Judge, High Court, 49, Theatre Road, Calcutta.

Proposer : Sir B. L. Mitter.  
Seconder : Johan van Manen.

(43) *Wilson, Harry Ellis Chasler*, M.B., Ch.B., D.S., Professor of Biochemistry and Nutrition, All-India Institute of Hygiene and Public Health, 21, Chittaranjan Avenue, Calcutta.

Proposer : L. L. Fermor.  
Seconder : A. M. Heron.

(44) *Chatterjee, Sisir Chandra*, M.D. (Edin.), M.R.C.P. (Edin.), D.P.H. (Edin.), Chief Medical Officer, Eastern Bengal Railway, 3, Koila-ghat Street, Calcutta.

Proposer : Sir U. N. Brahmachari.  
Seconder : Johan van Manen.

(45) *Kapur, Chooni Lal*, Makermal Colliery, Mari Indus, Punjab.

Proposer : L. L. Fermor.  
Seconder : A. M. Heron.

(46) *Weston, Arthur Tom*, M.Sc. (Vict.), M.Inst.C.E., M.I.E. (Ind.), Director of Industries, Bengal, United Service Club, Calcutta.

Proposer : L. L. Fermor.  
Seconder : A. M. Heron.

(47) *Brahmachari, Phanindra Nath*, M.Sc., M.B., 82/3, Cornwallis Street, Calcutta.

Proposer : Sir U. N. Brahmachari.  
Seconder : Johan van Manen.

(48) *Burt, Bryce Chudleigh*, C.I.E., M.B.E., B.Sc., I.A.S., Agricultural Expert, Imperial Council of Agricultural Research, 1, York Road, New Delhi.

Proposer : L. L. Fermor.  
Seconder : S. L. Hora.

(49) *Gladstone, John*, Assistant, Messrs. Gillanders Arbuthnot & Co., Ltd., 8, Clive Street, Calcutta.

Proposer : W. K. Dods.  
Seconder : L. L. Fermor.

In accordance with Rule 38, the General Secretary announced that the names of the following Ordinary Members, who had, since the last meeting, been suspended as defaulters within the Society's building, had now been removed as defaulters from the Society's registers for non-payment of dues :—

Jogesh Chandra Bose.

Harit Krishna Deb.

M. S. Mani.

Sham Lal Kapur.

N. L. Kothari.

Vidyanand Swami.

M. H. Moledina.

Mohammed Amin Abbasi.

The President called upon Dr. S. L. Hora to read an obituary notice of the late Dr. Ekendra Nath Ghosh, written by Dr. Baini Prashad (*vide* page 191).

The following paper was read :—

1. SUNDER LAL HORA.—*Ancient Hindu Conception of Correlation between Form and Locomotion of Fishes.*

It is commonly believed that the ancient Hindus have contributed very little of importance to the development of biology. The author has analyzed the observations contained in a passage of *Suśrutasaṃhitā* and shown that in those early days (*ca.* 300 B.C.) the Hindus were familiar with the various types of fresh-water habitats of fishes and had observed the influence of habitats on form. They also knew the modes of locomotion in different types of fishes and correlated them with the body forms. The modern conceptions regarding ecological classification of fresh waters and form and locomotion in fishes are discussed and it is indicated that the ancient Hindu ideas concerning these subjects are fully borne out by modern researches.

The author hopes that Oriental scholars will communicate to him references to fishes in old Sanskrit and Pali texts for analysis in the light of modern knowledge.

Mr. Van Manen said that a study of the world's classics though undertaken for entirely different purposes, repeatedly leads to finds of isolated instances of zoological observation. He gave as an example the remarkable passage in Chwang-tsze, a Chinese philosopher who lived about 300 B.C., regarding astivating fishes :

‘When the springs are dried up, the fishes collect together on the land. They moisten one another there by the damp about them, and keep one another wet by their slime.’ (Translation by Legge, S.B.E., 6, 1 ; 6, 5, and repeated later on in the same work.)

In quite another direction he would also draw attention to an Academic dissertation by Adolf Palm, published last year, 1933, in Tübingen, consisting of Studies on the Hippocratic treatise *ΠΕΡΙ ΖΙΑΙΤΗΣ*. It deals in large part with a pre-Aristotelian animal classification and contains valuable references to early Greek zoological science.

Systematic collection of all such references would be well worth the trouble. A difficulty would remain. Unless precise modern knowledge enabled the translator to know what exactly to look for, the ‘literary’ translation would most likely be incorrect. On the other hand there would also be a danger of considerable import that a prior knowledge

of modern data might influence the translation of such ancient statements. There would be a temptation, or even tendency, to read meanings into the text which the text by itself, without independent outside knowledge, might not yield.

Dr. W. A. Jenkins asked :—Does the information given indicate merely accurate observation, or is it knowledge arising from an understanding of the scientific laws operating in producing particular forms under particular conditions ?

Dr. S. P. Agharkar remarked :—The information contained in the verses from *Suśruta* shows clearly that the ancient Hindus were able to draw general conclusions regarding the form and habitat of fishes. As these generalizations are found to be correct by modern researches one can safely assume that the ancient Hindus have made systematic observations on the commoner fishes known to them.

Mr. U. Shanker Rao, in a written note drew attention to the fact that Dr. Hora's quotation showed that the ancient Hindus had made at least incipient observations concerning what now-a-days would be called the stream-lining of fishbodies.

Dr. Hora, in reply to Dr. Jenkins' enquiry stated that he has not made an extensive study of the biological knowledge possessed by Ancient Hindus. The present note was meant as a request to Pali and Sanskrit scholars to bring to his notice references in ancient texts bearing on biological knowledge. It would then become possible to state whether the Hindus had a sound knowledge of the animal kingdom or had made only stray observations. So far as the present paragraph from *Suśruta* was concerned, there was no doubt that the Hindus had made a series of different types of observations to correlate the form, habitat and mode of locomotion of fishes.

The following exhibits were shown and commented upon :—

1. K. N. DIKSHIT. *Four Coins.*

A gold coin of a new ruler named Virā Simha who was probably a Kachchhapaghata prince of Narwar in Gwalior State is exhibited. It shows on the obverse an unusually spirited representation of a galloping horse with a rider and the whole of the reverse is occupied by the legend which imitates the style of Central Indian issues of the Chedis. The coin is unique and belongs to the 11th century A.D.

A bilingual silver coin of Sultan Mahmud of Ghazni is another of the exhibits. On one side occurs the usual Arabic legend and on the other, both in the centre as on the border, is seen a legend in Nagari characters. Much interest is attached to the translation of the Kalima which is rendered as '*Ayyaktam ekam Muhammadu Avatāra*'. The anxiety of the early Muhammadan rulers of India to keep in touch with their subjects and to imitate Hindu types of coins is illustrated by a base gold issue of Muhammad bin Sam. Here the obverse shows the Goddess Lakshmi as on the coin of the Rathor ruler Govinda Chandra, while the reverse shows the name of the ruler written in bold Nagari characters.

The last coin is a unique copper issue of Barbak Shah, an independent ruler of Bengal. Before the Mughal conquest of Bengal, there were hardly any copper issues current in Bengal, both in Hindu and Muhammadan times and it is apparent that



all the small transactions were carried on by means of some currency like cowries or areca-nuts.

Dr. Hem Chandra Ray said :—I accept the speaker's suggestion that the unique gold coin of Virasimha does really belong to the *Paramabhāṭāraka-Paramēśvara Parama-Vaiṣṇava-Paramabrāhmaṇyo* Virasimha, the Kacchapaghūta ruler of Nalapur (mod. Narwar) whose Narwar grant is dated in V.S. 1177 (c. 1120 A.D.). See my *Dynastic History of India*, Vol. II, pp. 833ff. The date of the coin must in this case belong to the 12th century and not to the 11th.

As to the bilingual coins of the early Muslim rulers, some of them containing the portraits of a seated Hindu goddess, I draw attention to the bilingual issues of the Indo-Greek kings. Administrative necessity compelled both groups of these rulers to use Indian script and retain other Indian traits of Indian coins. These facts show that the early Muslim rulers were not blind and fanatical iconoclasts as they are often painted in late Muslim Chronicles and in modern text-books. In this connection I refer to the fact that Sultān Maḥmūd of Ghazni employed a Hindu general named Tilak and allowed him freedom of worship in his very capital.

Dr. B. Chhabra asked :—Can we interpret the word which has been read as 'tāṅkaṃ' in the same sense as Mr. Dikshit has in the present instance taken ?

Dr. U. N. Ghoshal asked :—(1) Is this combination of the Gaṅgeyadeva Kalachuri type with the Horseman type quite unique ?

(2) What is the reading of the Sanskrit equivalent of Hijrah on the unique coin of Sultān Maḥmūd ?

Mr. K. N. Dikshit, replying to the points brought up in the discussion by Drs. H. C. Ray and B. Ch. Chhabra, said, that Vira Simha, the ruler who issued the first coin under discussion, was the first to adopt the arrangement found on the later coins issued by Malaya Varman and Chahadadeva, in which the horseman type of the North-west was combined with the style of writing of Central India. As he lived about a hundred years before the rulers mentioned above, he must be given the credit of having initiated this type. The date of Vira Simha is undoubtedly to be taken as the first quarter of the 12th century and not the 11th century A.D., as stated in the abstract.

As regards the bilingual silver coin of Sultan Maḥmūd, a distinct attempt is traceable at translating all the words in the Arabic legend into Sanskrit ; thus, *Bismillā* is translated as *Avyaktīyanāmē* ; *ḥaḍa-ul-dirham* is translated into *Ayam tāṅkaṃ*, and *Ḥarb* into *Hata*. This is the first time that this word 'hata' has been used to express the sense of striking a coin.

Replying to Dr. Ghoshal, the speaker said that his tentative reading for what appears to be the translation of the word Hijra is *Madināyana* (transition from *Madinā*).

2. CYRIL S. FOX.—*A portable Electroscop for ascertaining the Radio-activity of spring Waters, natural Gases and Minerals.*

The ordinary electroscop is sufficiently well known to require no detailed description. A gold or aluminium leaf diverges from its support when both, carefully insulated, are electrostatically charged. The normal charge is roughly 350 to 400 volts. The leaf slowly collapses again due to a gradual loss of charge by leakage from various causes—moisture, not absolutely perfect insulation, cosmic rays, etc. Dry air is the best insulator known, but it may be rendered conductive by ionization due to the introduction of a radio-active substance.

The rate of fall of the gold or aluminium leaf in a normal slow manner is always ascertained and is recorded as the natural leakage of the apparatus. If then a known weight of a known radio-active substance is introduced the rate of fall of the leaf (caused by the ionization of the air round the insulated leaf and its support) less the natural leakage gives a measure of the radio-activity for comparison with other radio-active substances which are to be tested.

The most useful substance for examination in an electroscope is the element RADON, originally known as the emanation of radium. It is a heavy gas and strongly radio-active. Out of association with radium its half period is about 4 days, while radium always has radon in fullest equilibrium with it after about a month from the time when all radon was removed from it. Radon is very soluble in water and is frequently met with in mineral springs and can be readily detected by the electroscope.

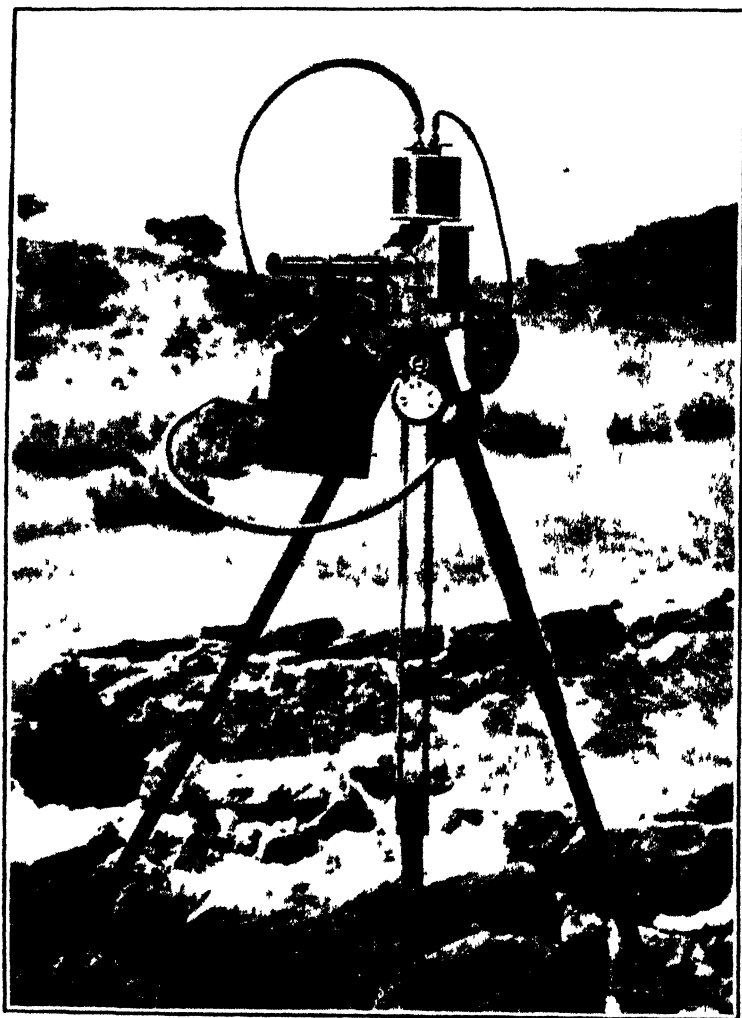
The normal procedure is to take a definite quantity of the spring water and after strong agitation in a special vessel the gas evolved is passed into a suitable chamber in the electroscope. The natural leakage of the apparatus having been previously determined the rate of fall of the leaf due to the introduction of the radon forced out of the water is next taken. The difference is due to the radon and this compared with a standard gives the radio-activity of the water in terms of radium.

There are naturally a number of corrections and other calculations to be made before the final estimate is obtained, but for this field apparatus these are reduced to a minimum by the design of the vessels and electroscope employed. The electroscope which is on view was used by the author a few weeks ago in Abyssinia in an examination of several mineral and thermal springs. The investigation so far as the author knows is the first of its kind outside Europe and no instrument of this type is available in England or India at the present time.

It may be mentioned in passing that very hot springs are not likely to contain radon as the gas is not retained by the water if the temperature exceeds  $150^{\circ}\text{F}$ . On the other hand true radium carrying waters are very rare because radium salts are relatively insoluble and are precipitated as the water cools. The author will explain the method of using this apparatus for examining powdered minerals and rocks while describing the instrument.

Dr. Fox before exhibiting the Field Electroscope, explained that the apparatus had been charged before 5.45 P.M. and that at 6.30 P.M. the fall of the leaf had been from 8.5 on the scale to 8.0 which corresponds to 3.0 volts and works out to a natural leakage of about 1.11 millivolts per second. He then briefly described the apparatus and explained the mode of working. A photograph of the apparatus is shown herewith.

Dr. *W. A. Jenkins* asked whether any control experiments with distilled water alone were employed. He expressed the view that moisture might so seriously affect the working of the apparatus, say during the



The Field Electroscope at a Spring in Abyssinia.

rainy weather in Calcutta, as to render it unreliable. He also gave it as his opinion that when working with strongly radioactive waters (charged with radon) the decomposition solid products of radon might render the apparatus unreliable for a considerable time afterwards and so give erroneous results if tests were made too soon after.

Mr. T. P. Ghosh asked if the Vichy and Evian and other waters sold in India contained radio-active matter. He stated that he consumed a dozen or such bottles of Evian water a week. He would like to know if the beneficial effects of such waters was due to radioactive matter, if any, contained in them.

Dr. C. S. Fox replying to Mr. T. P. Ghosh stated that he was not aware that any of the types of table waters mentioned had any radium element in them, but thought they had none. He thought that they may, at the springs where the bottles were filled, originally contain some radon, but as this element entirely disappears within a month it was unlikely that the beneficial effects of the waters could be due to radio-active matter.

Dr. Fox in replying to Dr. Jenkins said that it was not usual to do any control experiment with distilled water, but that it was rare that such a test was ever omitted. It was an essential feature that the natural leakage was determined before each test of a water or gas. Dr. Fox had not found, in the course of his recent work, any serious effect produced by the moisture in the gas introduced into the ionization chamber. He then conducted an experiment with an Abyssinian water which had been collected more than a month ago. He said it could not contain any radon of the original sample but if containing radium might show traces of radon formed since the sample was collected. The results showed that the fall of the leaf was barely 0.6 volts in 6 minutes or roughly 1.66 millivolts per second. This is not much more than the natural leakage and the difference can be ascribed to the moisture.

In regard to the question of the solid radio-active products of radon, which are left when a 'strong' water or gas is used, Dr. Fox stated that the fall of the leaf was so rapid that three observations (by re-charging) could be performed in ten or fifteen minutes, after which the air in the ionization chamber could be blown out and freed from these disturbing products. He had done this frequently and found that after three or four blowings the natural leakage was brought within the limits normally allowed for field work. If the natural leakage was above the limit it became necessary to open the apparatus and wipe the ionization chamber with alcohol and so restore it.

Before closing his experiments Dr. Fox passed radon from a dilute radium solution into the ionization chamber. The fall of the leaf was roughly 3.0 volts in 4 minutes 10 seconds, which is 12 millivolts per second, an amount much less than some of the waters he had tested in Abyssinia. He reminded his audience that it was a portable apparatus for intelligent use under conditions where a more elaborate instrument was not available and was to be used with care under as dry conditions as possible. The points raised by Mr. Jenkins were not found of serious effect in the field if the apparatus was fairly treated and the natural leakage carefully taken.

3. J. N. MUKHERJEE.—*A useful Method for rapidly determining the  $p_H$  of turbid Solutions*

On account of the lateness of the hour this exhibit was postponed till next meeting.

The President announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.



## OBITUARY NOTICES.

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DR. ERNST HARTERT.

(1859-1933.)

The sad death of Dr. Ernst Hartert on November 10 at Berlin is sadly deplored by this Society in common with the whole ornithological world, as it was only at the Annual Meeting last year that he was awarded the Joy Gobind Law Memorial Medal of the Society for his valuable researches. It may be noted that he was the second recipient of this Medal, the first award being made in 1929 to Prof. Max Weber of Holland.

Hartert was born in Germany and spent most of his youth in East Prussia, where he was educated. In 1892 he migrated to England and was appointed Director of the Rothschild Museum at Tring and continued to hold this appointment till his retirement in 1930. Though he spent 38 years in England he retained his natural German characteristics, but these were not of an aggressive type which is usually associated with Prussia. Though a foreigner, he achieved a remarkable amount of success as an ornithologist and a museum administrator in England and this can only be explained by his strength of character, tenacity of purpose and soundness of judgment, all of which were reinforced by his intense sincerity and keenness and his constant readiness to help and advise and, above all, by his original and very likeable—one may almost say, lovable—personality.

Hartert's greatest achievement was the building up of a marvellous collection of birds at Tring, which unfortunately since his retirement has gone over to America and is no longer available at Tring which as a result of Hartert's labours had become the 'Mecca' of all ornithologists. This remarkable collection—a little more than 280,000 skins—was not built up only by the expenditure of a great deal of money but was the result of continuous and persistent search and organization, year in and year out, to determine what gaps existed in the collection and how they could be made up. The collection was particularly complete in Palaearctic birds and formed material for Hartert's monumental work entitled 'Die Vogel der paläarktischen Fauna' which was started in 1903 and completed in 1922. Two supplements to this valuable work were issued in 1932-33. In this connection it may be mentioned that Hartert was the pioneer ornithologist who believed in Geographical forms or subspecies as a part of the natural scheme of classification, and in his works he introduced the grouping of these forms

by means of trinomial nomenclature governed by rules of strict priority. This was originally received with great opposition, but is now universally adopted.

Hartert's work in connection with the organization of the Tring Museum and the publication of that valuable organ of that Museum—'Novitates Zoologicae'—has also to be mentioned. In various volumes of this Journal he himself described hundreds of new forms of birds from all over the world, while his name has been perpetuated in a large number of birds described by others.

He was the mainspring in reviving the International Ornithological Congress and was elected as the President of the first post-war Congress at Copenhagen in 1926. I had the occasion of paying a visit to Tring earlier, but it was in 1926 and later in 1930 on the occasion of the International Congress meeting at Amsterdam that I came to know Hartert personally. His loss to the ornithological world is very severe indeed and it is a matter of great regret that so soon after the award of the Joy Gobind Law Memorial Medal to him he should have passed away. May his soul rest in peace !

B. PRASHAD.

(Read in the Ordinary Monthly Meeting on 5th March, 1934.)

MM. PANDIT KAMAL KRISHNA SMRITITIRTHA.

(1870-1934.)

The passing away of MM. Pandit Kamalkrishna Smrititirtha of Bhatpara on the 25th of January, 1934, at the age of 64 is an irreparable loss to the men of letters in Bengal. It is a loss which has particularly affected the Pandit community of Bhatpara and the Asiatic Society of Bengal of which he was an Associate Member and an editor in the *Bibliotheca Indica* Series. Kamalkrishna Smrititirtha was a Sanskritist, brought up under the ancient Tōl system but also familiar with modern critical methods. His connection with the Society was a very intimate one, extending over more than four decades (1891-1934).

His activities in connection with the Bhatpara Sanskrit College, the Calcutta University, the Hitavadi and the Oriental Institute of Baroda may be briefly summarized here. Just on the establishment of the Bhatpara Sanskrit College in 1900, Kamalkrishna, a young man of thirty and already a *Kavyatirtha*, was appointed a Professor of Kavya (Sanskrit Literature). In 1906, he became a Smrititirtha by passing the Government Title Examination and was elevated to the post of Professor of Smriti (Hindu Law) in that very College, which status he

retained till the day of his death. He won the Jogendra Research Prize of the Calcutta University in Comparative Indian Law of the year 1927 and his thesis which was written in Bengali was entitled 'A comparative study of the Law of Evidence according to the Smritis'. The thesis has been published in the *Journal of the Department of Letters*, Calcutta University, Vol. XX, 1930. The University of Calcutta also appointed him as an external examiner in M.A. Sanskrit since 1929. He also edited two Sanskrit works with Bengali translation for the Hitavadi Press of Calcutta, viz. Agastya Saṃhita and the latter half of Kalhana's Rājatarangini. The connection of Kamalkrishna with the Oriental Institute of Baroda was set up in 1928, when the Government of Baroda appointed him to be editor of the Daṇḍaviveka, a 16th century Hindu Penal Code of Mithila, for the *Gaekwad's Oriental Series*. The work saw light in 1931 as work No. LII of the G.O.S. and His Highness's Government further sanctioned the publication of Rājadharmā-Kaustūbha, a Smṛiti work of the 17th century, under his capable editorship. But ere the work could be completely published, Kamalkrishna died.

It now remains to describe in detail Kamalkrishna Smṛititīrtha's activities in connection with the Asiatic Society. Kamalkrishna crossed the thresholds of the premises of the Society early in 1891 and served for a period of six months as a proof-reader of the Sanskrit portions of the Sanskrit-Tibetan Dictionary of Rai Bahadur Sarat Chandra Das, C.I.E., which was then passing through the press. In 1897, he accompanied Pandit (afterwards MM. Dr.) Haraprasad Shastri in his first visit to Nepal for the search, cataloguing and purchase of rare Buddhist Sanskrit MSS. on behalf of the Asiatic Society of Bengal. In 1900 he was appointed an editor of Smṛiti MSS. for the *Bibliotheca Indica* Series and the official letter to that effect was signed by Frederic Eden Pargiter, one of the Past Presidents of the Society who was then officiating as the Honorary General Secretary. The task of editing as many as nine Smṛiti works and one astronomical work for the *Bibliotheca Indica* Series engaged him for more than three decades (1900-1931) and is a glorious achievement which will carry his name to distant posterity. His Excellency the Earl of Lytton who invested him with the title of Mahāmahopādhyaya in 1926 truly remarked that he had 'rendered signal services to Sanskrit learning by editing in the *Bibliotheca Indica* Series some of the rarest works of Smṛiti and a work on Astronomy, and no less an authority than the Asiatic Society of Bengal has shown its appreciation of his merit by making him an Associate Member. The nine Smṛiti works edited by him are Pre-Raghunandana digests of Bengal and Bihar, written from the 11th to the 16th century by four famous jurists, viz. Aniruddha Bhāṭṭa, Candēswara Thakura, Vācaspati Miśra and Govindananda



Kavikankanacārya. Of these nine works, Aniruddha Bhaṭṭa's Haralata, a work on ceremonial impurity, is one of the earliest digests of the Bengal School, its author being a scholar of the court of the king Vallala Sena.

The man Kamalkrishna Smrititirtha was even greater than the scholar. He possessed a great capacity for impressing everybody he came in touch with. He was a good orator in Bengali and an extempore composer of Sanskrit verses. He was an orthodox Brahmin Pandit of the Vasishta family of Bhatpara (24 Pergs.) which had settled there three centuries back and 'was famous for its learning and piety'. He dearly loved his family and tried to uphold its high traditions. He compiled in Bengali a comprehensive genealogical history of his family extending over three centuries, entitled *Bhattachapalli-Vasishtha-Vamsaparicaya*. Such was the man Kamalkrishna Smrititirtha ; and he was more. He was also the teacher of nearly hundred Sanskrit Pandits and the spiritual preceptor of hundreds of Brahmin families of Bengal. By his death the Society loses not only a prolific editor but also a valued member.

BHABATOSH BHATTACHARYA.

(Read in the Ordinary Monthly Meeting on 5th March, 1934.)

SIR P. C. MITTER.

(1875-1934.)

Sir Provash Chandra Mitter, whose death the Society mourns, was one of the many distinguished Bengalis, who joined the Society during the Presidency of Sir Rajendra Nath Mookerjee in the years 1924-25, when unprecedented numbers of the Calcutta intelligentsia and aristocracy came forward to show interest in the Society's labours by taking up membership in it. Officially Sir Provash took no active share in the Society's work, but on many an occasion he gave unstinted assistance by ripe advice and by exercising his great influence. The career of Sir Provash was a brilliant one. He joined the Calcutta High Court as a Vakil in 1897, and in 1924 became an Advocate in the same Court. Though a very successful lawyer, he was known throughout Bengal more for his political than for his legal activities. He may in effect be described as the leader of the liberal party, distinctly moderate in politics. He was one of the members of the Rowlatt Committee and came to the Bengal Legislative Council in 1916. From 1921 to 1924 he was a Minister, holding the portfolio for education, and during 1927-28 he was Minister for local self-government. In 1928 he was appointed member of the Governor's Executive Council

of which at the time of his death he was the Vice-President. In 1919 he was made a C.I.E., in 1924 he was Knighted, and in 1933 the distinction of K.C.S.I. was conferred upon him. He was a delegate to the Round Table Conference in London in 1930-31 and in 1931-32.

He died suddenly of heart failure, without any previous warning, on the 9th February, 1934, at about 2-15 in the afternoon, after having as usual performed his work in the morning to about 1-30 p.m.

This is not the place to discuss or estimate the work of Sir Provash in the fields of politics and government service. As said, his official contact with the Society was but small, though his interest in it as representing a fine old intellectual tradition in Bengal was genuine. It is more as a man and friend that we here wish to commemorate his memory. In his youth active sympathies with such diverse forms of idealism as the theosophical campaign of Colonel Olcott, and of the political campaign of Surendranath Banerjee, were indications of a fundamentally idealistic element in his nature. It has been rightly said of him : ' Sir Provash Mitter's generosity of outlook brought him into contact with many movements and causes and his was not the temper that refused sympathy and help when he saw that the aim was good. Such leisure as he had—and he managed to find some—was gladly given to them, his time and knowledge were at their service. Difficulties were removed by his knowledge, practical wisdom and capacity for influencing others. No labour was too great when the cause was good. He had a gift for getting on with people and those who quarrelled with him liked him as they said their hard things.'

The writer of these lines recalls the many intimate talks he had the privilege of having with Sir Provash, when he freely expanded and spoke of his deeper views of life and death, the world and his country. He had an extraordinary winning side to his nature, notwithstanding his decisive resoluteness in practical affairs. The writer recalls with melancholy feelings how the evening before his death he met Sir Provash as usual in the Club over a homely game of bridge, after which a pleasant little talk was the last contact with Sir Provash alive, without any forebodings of the blow that was to fall next day.

A chorus of esteem, affection and appreciation for the deceased was sung when the calamity became known. Bengal and the Society can ill afford the loss of so valuable and lovable a man as the late Sir P. C. Mitter, and we for our part wish to pay tribute to his memory in great affection and great respect.

JOHAN VAN MANEN.

*(Read in the Ordinary Monthly Meeting on 5th March, 1934.)*

## SIR C. C. GHOSE.

(1874-1934.)

In 1924, only one month after Sir P. C. Mitter, who also died in the present year, Sir Charu Chandra Ghose joined the Society as a Member. His was a distinguished career. He joined the Calcutta High Court as a Vakil in 1898. In 1907 he became an Advocate. In 1919 he was elevated to the Bench. On four different occasions he officiated as Chief Justice of Bengal. Early in 1934 he retired from the Bench and almost immediately after was appointed a member of the Bengal Executive Council in place of the late Sir P. C. Mitter. He held this office till April, when for reasons of health he was obliged to resign. Sir C. C. Ghose took an active part in the affairs of the Asiatic Society of Bengal. He joined its Council as a member in 1926 and served as such for three consecutive years. In 1929 he became a Vice-President. The next year he retired from the Council under the Rules of the Society, but rejoined it again as Vice-President in 1931. In 1932 he was elected President and re-elected in 1933. In July 1933 reasons of health forced him to resign, much to the regret of the Council. In 1934 he was, however, persuaded once more to accept a seat on the Council as a Member in the hope that the attendant duties might not prove too arduous for him, but most unfortunately he was once more obliged to give up his post on account of growing ill-health. As President he delivered in 1933 an instructive and well-documented address to the Annual Meeting of the Society on the Evolution of Jurisprudence and of Justice according to British ideas in India.

Sir C. C. Ghose's services on the Bench have been highly appreciated in legal quarters, and it has been said of him that he filled a large place in the public life of Bengal. On the administrative side of the High Court he was a tower of strength and independence and a mine of information.

Sir C. C. Ghose was equally highly appreciated as a Member of Council and President of the Society. His quiet prestige, his affability and tact, smoothed over many a difficulty and always worked constructively. An excellent Chairman, with broad views, he exercised a strong influence for harmony, unflinchingly resulting in positive work. His heart was to a large extent in the history and philosophy of his beloved law, and next literature in its widest sense claimed his love. The disease, which ultimately took him from us, made him seek medical help in Europe shortly before he died, with initially apparently beneficial results. The aggravation of his complaint soon after his return became, however, evident, and it was both a symbol of his interest in the Society's affairs, and an example of his self-sacrifice that he accepted his final term as a Member of the Council. None of us realized during this last term of service

on the Council how deep-seated was the illness from which he suffered, and his demise was a great shock to his many friends within and outside the Society.

The relations between the Asiatic Society and the Calcutta High Court have been many and varied, and Sir C. C. Ghose has been amongst its very distinguished representatives to take an active and valued share in the Society's labours. Personally, the writer of these lines has cause to remember several acts of graceful tact and courteous kindness on the part of Sir C. C. Ghose, and he has always been strongly impressed by his suavity of manner and friendliness of outlook. A good friend of the Society, a valued supporter of good causes and a distinguished son of Bengal has been lost in him. His memory will be cherished and the Society feels proud to have numbered him amongst its Presidents. We express our deeply affectionate regards for our late guide and friend whom we shall miss so badly.

JOHAN VAN MANEN.

(*Read in the Ordinary Monthly Meeting on 5th November, 1934.*)

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EKENDRA NATH GHOSH.

(1884-1934.)

The Society has to mourn the death on the 15th of October, 1934, of one of its very active members, Dr. Ekendra Nath Ghosh, Professor of Biology, Medical College, Calcutta. Ghosh joined the Society in February, 1918. A large number of his papers were published by the Society; his last paper entitled 'An Experimental Study of the Asphyxiation of some Air-breathing Fishes of Bengal' was published as recently as the 11th October, 1934.

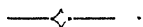
Ghosh was born on 3rd of January, 1884. He passed the First Arts Examination from the General Assembly's Institution in 1901 and joined the Medical College of Calcutta as a medical student. After a brilliant career in the Medical College he passed the L.M.S. examination in 1906 and entered the Department of Biology as Assistant Professor in 1908. He passed the B.Sc. and M.Sc. (Zoology) examinations in 1911 and 1914 respectively, and the M.D. examination in 1916. In 1913 he was awarded the Griffith's prize for his paper on the 'Nervous System of *Ampullaria globosa*'. On the retirement of Lt.-Col. R. E. Lloyd in 1917 he was appointed Offg. Professor of Biology in the Medical College of Calcutta and was later confirmed in this post. He held this appointment till the date of his death.

Though essentially a biologist and physician, Ghosh had a versatile personality and this was reflected not only in his biological work but also in his studies on Ancient Sanskrit Shastras, Ayurveda and Hindu Astronomy. He published valuable contributions on these subjects in various journals both in India and abroad. Personally he was a man of very unassuming character, a sincere friend, and a sympathetic teacher. His loss at the early age of 50 will be mourned by his large circle of friends and by the Asiatic Society.

BAINI PRASHAD.

*(Read in the Ordinary Monthly Meeting on 3rd December, 1934.)*

## PROCEEDINGS OF THE MEDICAL SECTION MEETINGS, 1934.



SEPTEMBER, 1934.

A meeting of the Medical Section of the Asiatic Society of Bengal was held on Tuesday, the 4th, at 6 P.M.

### PRESENT :

LT.-COL. R. KNOWLES, B.A., M.R.C.S., L.R.C.P., I.M.S.,  
F.A.S.B., Vice-President, in the Chair.

### Members :

Brahmachari, Sir Upendranath	Chopra, Lt.-Col. R. N.
Cooper, Mr. H.	Khambata, Dr. R. B.
Pasricha, Captain C. L.	

(There were 39 visitors present.)

The minutes of the last meeting were read and confirmed.

Lt.-Col. R. Knowles, B.A., M.R.C.S., L.R.C.P., I.M.S.,  
F.A.S.B., read the following papers :—

1. *Mosquito Density and Mosquito-borne Diseases in Calcutta City.*
2. *Nuclear Division in Malaria Sporozoites.*

Col. Knowles said :—

(1) During a period of four years the density of breeding of *Anopheles stephensi* in the centre of Calcutta city has been kept under close observation in an area one square mile in extent around the Calcutta School of Tropical Medicine. This species of mosquito pullulates in almost every receptacle for water storage throughout the city, especially in masonry tanks and overhead galvanized iron cisterns on the roofs for the filtered and unfiltered water supplies. Out of 11,927 examinations during four years no less than 33 per cent. gave positive results.

(2) The correlation of the monthly incidence of *A. stephensi* breeding with the meteorological conditions in the city is shown (the latter figures being from the means of twenty years' records at Alipore). The maximum breeding occurs in July and the minimum in April.

(3) During the same four years the density of breeding of *Aedes aegypti* in the same area has been under observation. The chief breeding sites are the same as those for *A. stephensi*. Out of 11,927 examinations of such sites no less than 41 per cent. gave positive results. The greatest intensity of breeding was found during July and August, and the lowest in February and April.

(4) The breeding of *Culex fatigans* throughout the same area was observed for two years. The chief breeding sites are the same as those of *A. stephensi* and *A. aegypti*. Out of 4,339 examinations of suspected

breeding sites 8 per cent. gave positive results. The greatest intensity of breeding was found in November and the lowest in July.

(5) Many residents of Calcutta city acquire malaria during visits to the mofussil. There is continuous and heavy importation of malaria into the city by immigration from heavily endemic areas in Bengal. The local strain of *A. stephensi* can be very readily infected experimentally with malaria. Meteorological conditions for malaria transmission are suitable over a large part of the year. Yet at present malaria is but little endemic in the city. What are the reasons for this discrepancy?

(6) The chief reason for the low endemicity in Calcutta appears to be that the maximum density of *A. stephensi* breeding (July-August) fails to coincide with the chief incidence of malaria cases (October-November), and especially of gametocyte carriers (December). Details are given with regard to all three species of malaria parasite, and conditions in Bombay and Calcutta are contrasted.

(7) The maximum peak of *Aedes aegypti* breeding is in July and August; and this corresponds to the maximum intensity of fresh infections with dengue (August and September). Here the correlationship is almost perfect. This accounts for the devastating epidemics of dengue which so often sweep the city and cause enormous financial loss.

(8) New admissions for filariasis are at a fairly uniform rate throughout the year (general filaria rate: 9.5 per cent.). The most favourable period for transmission is during the monsoon (July-September), when the intensity of breeding of *Culex fatigans* is at a very low level. The peak for *Culex* breeding is in November, when conditions for filariasis transmission are rapidly becoming unfavourable. This want of coincidence keeps the filariasis rate at a relatively low level.

#### DISCUSSION.

Dr. C. Strickland—

I think we must all have realised from Col. Knowles' interesting lecture (which I wish to thank the Society for giving me an opportunity to listen to) what a great number of factors go to make up the malaria incidence in the community.

In this connection I would like to tell you of one or two matters which I think Col. Knowles did not mention and which have been elucidated by Dr. Roy and myself in the course of a survey of the adult anopheline prevalence in Calcutta.

In this survey we found a rather irregular monthly distribution of the mosquitoes though Dr. H. P. Choudhuri has found there was a definite positive correlation between our catch and the absolute humidity and maximum temperature, so that in October and November there was a great rise in the mosquito prevalence. We also found that about twice as many anophelines were caught in the mornings between 6-10, as in the evenings from 4 to 8.

Of the total catch 90 per cent. were *A. rossii* or *A. vagus* which probably are of small importance in the malaria incidence.

Of the remaining 10 per cent., about 3 per cent. (or 273 ♀ and ♂) were *A. stephensi* and these were found mostly in September (i.e. somewhat before the general anopheline increase) corresponding with what Col. Knowles has told us of the time of breeding of this species in the rains. This breeding time, Dr. Roy and I confirm and moreover we have found that not only that but they hatch out more readily in the rains than in the hot or cold weather.

We caught 3 *funestus* and 3 *ludlowii* in the year.

Regarding Col. Knowles' statement that *ludlowii* is a worse carrier than *stephensi*, I am not quite sure whether he meant epidemiologically or from the point of view of potential infectivity. If the former, perhaps we can agree with him as I have seen some fulminating epidemics caused by *ludlowii*, worse perhaps than any epidemics caused by *stephensi*, but

I cannot agree with the latter interpretation as Dr. Roy and I have found *stephensi* 100 per cent. infective (in the cold weather) in Calcutta, and no mosquito can be worse than that.

Dr. Lal—

We are grateful to Col. Knowles for giving us a bird-eye view of the malaria problem in Calcutta. Being to a certain extent familiar with similar problems in the Punjab I am specially struck with the absence of any reference to *A. culicifacies* which is as much, if not more, formidable a malaria carrier in that province as *A. stephensi* and which breeds in just the type of places as *A. stephensi* does here.

The lack of correspondence between *A. stephensi* breeding season and malaria incidence, brought out by Col. Knowles is of special interest. The lecturer suggests the importance of a study of zoophilism in this connection. It appears doubtful that zoophilism will be found to play an important rôle under urban conditions such as we have here. For one thing, the seasonal prevalence of adult mosquitoes cannot be wholly inferred from the presence of larvæ. One must also know something of the average length of life of the adult insects. Among other factors the possibility of a want of correspondence in seasonal prevalence of mosquitoes and the period of favourable ratio of male and female gametocytes in the human host (which is also liable to seasonal variation) may be considered. The non-specific immunity in the population specially exposed to mosquito bites (due to economic conditions) may be worth considering and a comparative study of the affected communities in Bombay and Calcutta may possibly be of some interest.

Dr. R. O. A. Smith—

*A. stephensi* were responsible for the malaria prevalent in Bombay city. Their chief breeding places in Bombay were in wells, and when these were closed malaria diminished to a great extent. Since the population of Bombay and Calcutta are much alike and also the temperature and humidity, it is strange that *A. stephensi* which is very prevalent in Calcutta has not caused anything like the same amount of malaria. One outstanding difference to my mind mentioned by Col. Knowles was the difference in the breeding sites in Calcutta compared with Bombay. Here they are found breeding in various receptacles, metal, wooden and even glass, and in one tank at least that was carefully observed for four years no breeding was detected. Could the differences in the breeding sites and consequently in the composition of the water in which the larvæ lived have anything to do with the prevalence of the malaria infection?

Dr. K. L. Chowdhury -

I am very surprised to hear the remedy suggested by the learned lecturer. He based his conclusions on the observations of one square mile in the most central portion of the city, viz. Ward No. 8. The breeding of mosquitoes was not only related to the supply of water, but also to the disposal of the supplied water. Col. Knowles failed to observe that conditions of the whole city varied so much in different parts. In suggesting the remedy the question of the *A. stephensi* zone of this city alone occurred in his mind. *A. stephensi* zone of this city, corresponding roughly to the sewered area, comprises only about 5,000 acres out of the total area of 20,101 acres, i.e. only one quarter of the whole city. The overhead iron cisterns appeared to him to be the only plague spots of this city, but what about lakhs of masonry cisterns, unserviceable articles, gully pits, cesspits, fire buckets, flower tubs, a few thousands of tanks and ponds, over 12 miles of wide water channels, about 130 miles of open kutchas drains,—all breeding millions and millions of disease-carrying mosquitoes and causing terrible nuisance all over the city? Will a continuous supply of filtered and unfiltered water in the



city solve this side of the problem? How would the problem of *A. ludlowii*, which caused last year a severe outbreak of malaria in Beliaghata, be solved if no larvacides are used to treat the actual breeding places in the locality? One mile of open kutchra drain will breed many more *C. fatigans* than all the iron cisterns taken together. Again, in this hot country, like India, a continuous supply of filtered water will not put a stop to collecting water in masonry cisterns or other receptacles. Col. Knowles' suggestion seems impracticable in another way, viz. it will not be financially possible, I think, for the Calcutta Corporation to extend their filtered water supply from 8 to 24 hours daily while they are already finding it difficult to make an adequate supply during the scheduled hours due to the rapid increase of population in the city. Collection of rain water in odd receptacles, necessity of storing water in fire buckets and on account of some professional demand will not also be remedied in this way.

I would like to point out a concrete instance where continuous supply of water has had an insignificant bearing on the problem of mosquito-control. That is New Delhi, where people enjoy 24 hours' water supply; but in spite of this and absence of wells New Delhi is getting more malaria day by day due to *A. stephensi* and the New Delhi Municipal Board has contemplated to start a Mosquito Brigade.

This statement of Col. Knowles 'malaria is not apparently a very serious danger to Calcutta city' was also very surprising, because the Chief Executive Officer of the Calcutta Corporation stated in the annual report of 1932-33 that new cases of malaria in this city were 14,022 in 12 months as recorded by the Ward Health Associations.

On the whole, Col. Knowles' conclusions are misleading and contradictory to the views held by the other experts who made more elaborate study of the situation.

The methods of control of mosquitoes in this city should, I think, be actually directed in the following lines :-

1. Regular and vigorous house to house inspection for destroying mosquitoes inside premises.
2. Sanitary regulations for taking proper care of water reservoirs.
3. Educative propaganda to the residents of this city.
4. Anti-mosquito measures in all outside water-collections, viz. open drains, ponds, tanks, low-lands, swamps, cesspits, streets, gullies, wells, water-channels, fire buckets, country boats, ships in docks, etc.
5. Careful study and gradual introduction of biological control on mosquito breeding in the tanks and ponds (over 3,000 in number), the existence of which cannot be done away with for economic and industrial reasons and also for water scarcity in the border ward.

Col. Knowles in replying said that he had considered *A. ludlowii* more potentially dangerous than *A. stephensi* from the epidemiological point of view. He agreed with Dr. Strickland that very many factors other than mosquito density were concerned in the malaria problem of Calcutta. The different variation in the number of anophelines caught in the mornings and evenings was a new and most interesting finding. With regard to Dr. Smith's remarks, he had no information with regard to the composition of the waters in the breeding sites; as far as he knew no one in Calcutta had dissected wild *A. stephensi* in Calcutta to find out the gametocyte and sporozoite rates. In reply to Dr. Chowdhury he had certainly not the very slightest intention of belittling the extremely valuable work which the malaria control department of the Corporation was carrying out under circumstances of exceptional difficulty; their work was essential. But he believed that the introduction of a water supply at sufficiently high pressure would abolish at least 50 per cent. of the breeding sites in the city. In stressing the importance of this, he

had only repeated what many experts who had examined the problem had insisted on for many years. Bombay had made special efforts in this matter and had been successful; Calcutta could do the same. In Freetown in Sierra Leone the introduction of a piped water supply had eradicated malaria almost from the town. The parts of Calcutta without a piped water supply would of course always require larvicide control.

### OCTOBER, 1934.

A meeting of the Medical Section of the Asiatic Society of Bengal was held on Wednesday, the 3rd, at 6 P.M.

#### PRESENT :

LT.-COL. R. KNOWLES, B.A., M.R.C.S., L.R.C.P., I.M.S., F.A.S.B., Vice-President, in the Chair.

#### Members :

Chopra, Lt.-Col. R. N.

Hora, Dr. S. L.

(There were 22 visitors present.)

The minutes of the last meeting were read and confirmed.

The following papers were read :—

1. LT.-COL. R. N. CHOPRA, C.I.E., M.A., M.B., I.M.S., F.A.S.B.—*Blood Changes in Opium Addicts.*

2. LT.-COL. R. KNOWLES, B.A., M.R.C.S., L.R.C.P., I.M.S., F.A.S.B.—*Spirochaete in Guinea-pig.*

#### 1. *Blood Changes in the Opium Addicts.*

Colonel Chopra said :—

The hydrogen ion concentration is lowered as compared with those of normal individuals. This corroborates an increase in the carbon dioxide tension and a consequent loss of sensitiveness on the part of the respiratory centre of the addicts. Buffer action is considerably diminished, probably due to a lower alkaline reserve observed in such cases and also due to the fact that this lower alkaline reserve is further rendered inefficient as a buffer due to the increased carbon dioxide tension. The increase in the surface tension points to a relative increase in the fluid content of the sera and a diminution in the protein contents. The decrease in the relative viscosity also corroborates the above conclusions. The viscosity of the whole blood is found to increase in some of the cases most probably due to the swelling of the red blood cells on account of the increased carbon dioxide tension.

The total and the individual proteins are also changed in the following way : The total proteins are diminished. The albumin fraction is not diminished in any case; on the contrary, it is found to increase appreciably in many of the cases. This increase in the albumin fraction is probably responsible for the increase in the fluid content of these sera as observed by various workers. Part of this fluid is drawn in and reserved in the red cells due to an increase in the osmotic pressure inside such cells. The hydræmia observed on withdrawal may be probably due to the return of this fluid to the blood

and to the tissue cells, later on. The pseudoglobulin fraction is considerably diminished. The euglobulin fraction is found to increase. From Chick's observations that euglobulin is an adsorption compound of pseudoglobulin with lecithin, the drainage of lecithin from the nerve cells seems to be probable, and an explanation for the degeneration of the nervous tissues from this point of view is indicated. A mode of treatment has also been suggested herein for both addiction and withdrawal.

## 2. *Spirochæta* in Guinea-pig.

Colonel Knowles said:—

1. A blood-inhabiting spirochæta of the guinea-pig, belonging to the relapsing fever group, is described. The infection is easily transmissible from one guinea-pig to another by blood inoculation. White rats and rabbits are also susceptible.

2. The course of the disease resembles that of avian spirochetosis in the fowl, but is much less severe, the mortality being about 31 per cent. After an incubation period of 2 to 6 days spirochætes appear in the blood, multiply rapidly, are present for 7 to 28 days, and then disappear. The animal may die at the height of the infection, or a few days after the spirochætes have disappeared, or may recover.

3. The disease is definitely febrile in the guinea-pig.

4. The infection does not appear to be hereditarily transmitted, nor is there any transmitted immunity. In animals which have recovered from infection there is a solid immunity.

5. Relapses occurred in 9 out of 69 animals.

6. During the height of the infection the internal viscera swarm with spirochætes, but after the disappearance of spirochætes from the peripheral blood no spirochætes can be detected in emulsions of the internal viscera and these emulsions are not infective to clean animals.

7. The spirochæta is one typical morphologically of the relapsing fever group; with a length of from 13.5 to 23 microns, thin and delicate and with finely tapering end. By special staining a very delicate single terminal flagellum can be demonstrated at each end. The spirochæta can be readily cultivated in Galloway's medium.

8. In fed *Argas persicus* the guinea-pig spirochæta develops in a manner exactly similar to that of *Spirochæta anserina*. The vast majority of the ingested spirochætes disintegrate and die. A few however survive and divide very rapidly. Very thin and delicate *tenuis* forms are produced and these pass into the hæmocoel from the 3rd to the 5th day. From this they invade all the viscera of the tick. There is heavy and progressive invasion of the salivary glands, whereas the infection in the gut slowly dies out. Emulsions of the infected salivary glands of the tick are infective on inoculation into clean guinea-pigs, but we have been unable to cause infection by the bite of infected ticks. Presumably in Nature the transmitting vector is some species of tick which gains access to guinea-pigs.

9. Previous records of blood-inhabiting spirochætes of rodents are discussed.

10. It is suggested that the name *Spirochæta cobayæ* nov. sp. be given to this organism.

Colonel Chopra—

I have heard with great interest Col. Knowles' paper. I would like to ask if Col. Knowles found large number of spirochætes in the central nervous system of these guinea-pigs. In relapsing fever in man it is said that the spirochætes are found in the brain after they have disappeared from the peripheral blood after arsenical injections. Secondly, I would like to inquire if Col. Knowles has tried the effect of arsenicals on the guinea-pig spirochæta. In case of spirochæta of syphilis it has been

shown that the organism assumes a ghost-like form under arsenical treatment but may not be killed. Such forms become active again and that is why arsenicals do not eradicate the disease when given by themselves. Does any such change take place in the case of the guinea-pig spirochæte?

Colonel Knowles—

In reply said that spirochætes do occur in large numbers in the central nervous system of guinea-pigs. The effect of arsenicals on this organism has not been tested.



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**(Complete.)**



**YEAR-BOOK**  
**OF THE**  
**ROYAL ASIATIC SOCIETY OF BENGAL**

---

**VOLUME II**

**1936**



His Majesty, the King Emperor, has been graciously pleased to grant permission to the Asiatic Society of Bengal to use the title 'Royal' before its name.

The Society, therefore, will henceforth be known as the 'Royal Asiatic Society of Bengal', and the *Journal* and *Year-Book* will be called *Journal of the Royal Asiatic Society of Bengal* and *Year-Book of the Royal Asiatic Society of Bengal*, and the abbreviations for references will be : JRASBL.; JRASBSc.; and YBRASB.

CALCUTTA,  
1, PARK STREET,  
August, 1938.

JOHAN VAN MANEN,  
*General Secretary,*  
*Royal Asiatic Society of Bengal.*



# Year-Book, Royal Asiatic Society of Bengal, 1935.

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## PROCEEDINGS OF THE ANNUAL MEETING, 1936.

### FEBRUARY.

The Annual Meeting of the Asiatic Society of Bengal was held on Monday, the 3rd February, 1936, at 5-30 P.M.

### PRESENT.

SIR LEWIS FERMOR, KT., O.B.E., A.R.S.M., D.Sc., F.G.S.,  
M.INST.M.M., F.R.S., F.A.S.B., President, in the Chair.

#### *Members :*

Agharkar, Dr. S. P.  
Barwell, Lt.-Col. N.  
Bent, Mr. W. A.  
Bhose, Mr. J. C.  
Biswas, Mr. Kalipada  
Bogdanov, Mr. L.  
Bose, Mr. M. M.  
Brahmachary, Rai Bahadur S. C.  
Brown, Mr. Percy  
Calder, Mr. C. C.  
Chakladar, Mr. H. C.  
Chakravarti, Mr. C.  
Chanda, Rai Bahadur R.  
Chatterjee, Mr. P. P.  
Chatterji, Dr. S. K.  
Chopra, Brevet-Col. R. N.  
Darbari, Mr. M. D.  
Datta, Mr. H. N.  
De, Mr. K. C.  
Dey, Mr. Mukul  
Dunn, Dr. J. A.  
Ezra, Sir David  
Gee, Mr. E. R.  
Ghose, Mr. T. P.  
Ghosal, Mr. U. N.  
Gladstone, Mr. J.  
Heron, Dr. A. M.  
Hobbs, Mr. H.  
Hora, Dr. S. L.

Hosain, Dr. M. H.  
Jack, Hon'ble Mr. Justice R. E.  
Klebe-Brandt, Dr. A.  
Knowles, Lt.-Col. R.  
Ledrus, Rev. Fr. M., S.J.  
Mahindra, Mr. K. C.  
Mahtab, Maharaj-Kumar U. C., of  
Burdwan  
Majumdar, Mr. N. G.  
Manen, Mr. Johan van  
Mitter, Mr. S. C.  
Modi, Mr. J. R. K.  
Mukherjee, Dr. J. N.  
Mullick, Mr. M. L.  
Olpadvala, Mr. E. S.  
Pasricha, Capt. C. L.  
Rahman, Mr. S. K.  
Rao, Mr. U. S.  
Rossetti, Mr. F. F.  
Singh-Roy, Lt. S.  
Sinh, Kumar Raghubir  
Sinha, Kumar S. C.  
Sircar, Mr. Ganapati  
Sommerfeld, Mr. A.  
Stapleton, Mr. H. E.  
Urquhart, Dr. W. S.  
Vidyabhusan, Mr. A. C.  
Wadia, Mr. D. N.  
Wilson, Dr. H. E. C.

and others.

#### *Visitors :*

Barwell, Mrs.  
Basak, Dr. M. N.  
Basu, Mr. B. K.  
Bhose, Mr. S.  
Bingham, Mr. George E.  
Bishop, Mr. H. C. W.  
Bishop, Mrs.  
Biswas, Mrs. K. P.  
Biswas, Mr. P. C.  
Bose, Dr. G. S.  
Chatterjee, Dr. M. M.  
Covaloff, Miss O.

Deuster, Mr. R. H.  
Dutt, Mr. D.  
Dutt, Mr. S. C.  
Ellis, Mr. Norman A.  
Emanuelov, Mrs.  
Fermor, Lady  
Flury, Mr. E. C.  
Francoil, Mr. J. H.  
Gee, Mrs.  
Ghose, Mr. D. C.  
Hand, Dr. Henry  
Holy, Dr. Ing. Ian

*Visitors :*

Innes, Mr. C. A.  
 Kar, Mr. Haridas  
 Khan, Mr. N. Ali  
 Khanna, Mr. K. L.  
 Knight, Rev. P.  
 Knight, Mrs.  
 Lacey, Mrs. Patrick  
 Mitter, Mr. N. C.  
 Ojha, Mr. Amrit Lal  
 Patterson, Hon'ble Mr. Justice D. C.  
 Rankin, Mrs. E. H.  
 Ray, Dr. H. N.

Ray, Mrs.  
 Richardson, Mr. J. H. S.  
 Ross, Mr. J. B.  
 Sinha, Mr. R. K.  
 Sommerfeld, Mrs. A.  
 Spencer, Dr. E.  
 Thomas, Mr. R. A. S.  
 Townend, Mrs.  
 Urquhart, Mrs.  
 Verstraeten, Rev. Fr. A., S.J.  
 Worthington, Mr. R. H.

and others.

The President in declaring the Annual Meeting open said :—

‘ LADIES AND GENTLEMEN,

I have to my regret to announce that H.E. the Governor, our Patron, is prevented from attending our meeting on account of absence from Calcutta. He has, however, expressed his good wishes for the success of our function and it is my pleasant duty to communicate this message to you.’

The President ordered the distribution of the voting papers for the election of Officers and Members of Council for 1936, as well as the voting papers for the election of Ordinary Fellows proposed by Council, and appointed Messrs. H. Hobbs and L. Bogdanov to be scrutineers.

The Annual Report was then presented. (See page 44).

The retiring President then delivered his Annual Address. (See page 9).

The President called upon the scrutineers to report and announced the result of the Council Election. (See page 33).

The President said :—

‘ LADIES AND GENTLEMEN,

I now announce the result of the Council vote. On the report of the scrutineers I have the pleasure to declare all the candidates for the next year set forth in the ballot paper duly elected.

I would propose that in communicating his election as President to His Excellency, the Governor of Bengal, we should express our thanks to him for having given us the permission to do so.

By this election we have revived an old tradition, as the Society during its long career has had the honour of having three Viceroys and five Governors of Bengal as its Presidents. Sir John Anderson himself is a scholar of considerable distinction, and science has lost what Government has gained by the circumstances of his career.

As I have not stood for re-election to the Council on account of my impending departure from India, I will now vacate the

Chair and request Sir David Ezra, the Senior Vice-President present, to occupy it in the unavoidable absence of our new President.'

Sir David Ezra said :—

'I think that as this is probably the last time that we shall have the privilege of the presence of Sir Lewis Fermor in our midst, I express the desire of all present in proposing that he should continue to occupy the Presidential Chair for the rest of the evening.'

The Meeting agreed, and Sir Lewis resumed the Chair.

The Chairman then made the following announcements :—

'I have now great pleasure in announcing that, having heard the report of the scrutineers, I declare the following Ordinary Members :—

Dr. S. K. Chatterji,  
Dr. A. M. Heron,  
Mr. N. G. Majumdar, and  
Nawab Habib-ur-Rahman Shirwani,

to have been duly elected Ordinary Fellows of the Asiatic Society of Bengal.'

'I have now to announce that papers from six candidates have been received in competition for the Elliott Prize for Scientific Research for the year 1935 which was for Geology and Biology, including Pathology and Physiology and the Trustees have judged the papers of one candidate deserving of the award.

The prize for the year is accordingly awarded to Mr. Kalipada Biswas of Royal Botanic Garden, Sibpore, for meritorious publications on the subject of Botany.

The prize for 1936 will be for work in Mathematics regarding which a detailed announcement has been published in the *Calcutta Gazette* and the *Bihar and Orissa Gazette*.'

The Chairman conveyed his hearty congratulations to Mr. Biswas.

The Chairman then said :—

'My next announcement regards the Barclay Memorial Medal. This medal is awarded biennially for conspicuously important contributions to Medical or Biological science with special reference to India.

This year the medal is awarded to Dr. Birbal Sahni, Professor of Botany, Lucknow University, for his long-sustained and distinguished labours in the field of Botanical research.'

'My next announcement regards the Joy Gobind Law Memorial Medal. This medal is awarded every three years for conspicuously important contribution to the knowledge of Zoology in Asia. This year the medal is awarded to Professor Lew Semenowitch Berg, Chief of the Bureau of Applied Ichthyology and Professor of Geography, State University, Leningrad, Russia.'

After these announcements the Chairman declared the Annual Meeting to be dissolved and invited the guests present to examine the collection of exhibits (see page 34) and the members present to reassemble round the table for the Ordinary Monthly Meeting for the election of Members and transaction of business.

# ANNUAL ADDRESS, 1935-36.

## THE DEPLETION OF INDIA'S COAL RESERVES.

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### I. INTRODUCTION.

We are met here this afternoon under the shadow of a great sorrow, the death of our beloved King George V. This Society is now in the 153rd year of its existence, having been founded in the reign of King George III and whilst Warren Hastings was Governor-General of India. We have seen the passage of six monarchs in Britain and of 32 Governors-General in India, and have thus become a part of the history of British India. In spite of wars and other vicissitudes of history, this Society has been enabled to carry on unhampered its fruitful labours of scholarship and research. Not only, therefore, as loyal subjects

do we grieve at the passing of His Majesty King George V, but as grateful beneficiaries of the system of Government that he personified. We also extend our deepest sympathies to Queen Mary, and to the new King-Emperor, Edward VIII, in their personal loss. In extending this sympathy we also welcome our new King, and pray that during his reign the conditions may continue that render possible the peaceful researches of men of letters and of science, and the fruitful production of works of art by those who are suitably gifted.

Two days before the death of King George occurred that of Rudyard Kipling. With the almost simultaneous passing of these two notable personalities it will seem to many that an era in British history has come to an end.

It is the practice for the President of your Society to deliver an Address at the annual meeting held customarily on the first Monday in February. This privilege falls to my lot once more.

The General Secretary has already given you a résumé of the report of the Council of the Asiatic Society of Bengal upon the progress of the Society during the calendar year 1935. There are no special points in this account that require further elaboration by me, but it is necessary to refer to the death of three of our Fellows—two during the year 1935, and one at the beginning of this year.

The senior of these was Dr. P. J. Brühl, who has been a member of this Society since 1909 and a Fellow since 1912. After a distinguished career in Calcutta, first at the Engineering College, Sibpur, and later at the University of Calcutta, Dr. Brühl retired to Bangalore, where he resided until his death. Brühl was known not only for his original researches in Botany, but was a competent exponent of several other branches of science including Geology and Physics. One of the medals of the Society, the Paul Johannes Brühl Memorial Medal, has been named after him.

Whilst Brühl left us in the fulness of years, Lt.-Col. H. W. Acton, a member of the Society since 1921 and a Fellow since 1930, has died long before the allotted span of life, thereby depriving the School of Tropical Medicine, Calcutta, of a chief whose versatility in medical research has long been a source of inspiration to the school.

Since the year ended, we have lost a third Fellow, namely Dr. A. C. Woolner, Vice-Chancellor of the University of the Punjab and known throughout India for his oriental scholarship. Woolner had been a member of the Society since 1906 and a Fellow since 1927.

I will now refer to a matter that will be a source of pleasure and gratification to you all, namely that my successor in this Chair is to be His Excellency Sir John Anderson, Governor of Bengal, who has hitherto been on our rolls as a Patron, but has recently been elected an Ordinary Member of the Society.

It may interest you to learn that on several occasions in the past we have been honoured by either the Viceroy or the head of the Province of Bengal accepting the office of the President of this Society. The following is a list :—

Sir John Shore (later Lord Teignmouth), Governor-General of India ..	1794 to 1797
The Earl of Moira (later Marquess of Hastings), Governor-General of India..	1815 to 1820
Sir Henry Hardinge (later Lord Hardinge), Governor-General of India ..	1844 to 1847
Sir Ashley Eden, Lieutenant-Governor of Bengal .. ..	1881 to 1883
Sir Charles Elliott, Lieutenant-Governor of Bengal .. ..	1893 to 1894
Sir John Woodburn, Lieutenant-Governor of Bengal .. ..	1900 to 1902
Sir Andrew Fraser .. ..	1905 to 1907
Lord Carmichael, Governor of Bengal ..	1913 to 1915

We shall all be glad to welcome the addition of Sir John Anderson's name to this illustrious list ; it will be especially fitting that Sir John, as His Majesty's representative in Bengal, should be President when the Society receives the honour of being permitted to prefix the title ' Royal '.

## II. THE DEPLETION OF INDIA'S COAL RESERVES.

A perusal of the records of our Society will show that the Address of the President at the annual meeting is normally devoted to a subject of academic interest, either in arts, letters or science : and last year I addressed you upon the development of scientific research in India to the end of the nineteenth century, thereby conforming to the normal. This trend arises not from any rule of the Society, but from its usual interests. According, however, to the paraphrase of the well-known passage in the original Address of our Founder, Sir William Jones, describing the objects of our Society :

'The bounds of its investigations will be the geographical limits of Asia, and within these limits its enquiries will be extended to whatever is performed by man, or produced by nature.'

This year I propose to address you upon one of the products of nature, namely coal, in one of its economic aspects, namely the available resources of coal in India, and the fact that the quantity of this substance ' produced by nature ' that will become available for use by man depends upon the manner in which mining operations are ' performed by man '.



When I arrived in India in the fall of 1902, the mineral industries of India were still in their comparative infancy, as is shown by the fact that the average annual value of the total Indian production of all minerals was only £4,253,706, the value for 1903 being £4,988,527. From then onwards successive quinquennial periods showed a rapidly increasing total value until the period 1919-1923, as is shown by the following figures :—

Period.	Average annual value of total mineral production of India.	Average annual value of coal production of India.	Ratio of value of coal production to total value.
	£	£	Per cent.
1898-1903 ..	4,253,706	1,225,677	28·8
1904-1908 ..	6,716,325	2,139,249	31·8
1909-1913 ..	8,393,222	2,969,305	35·4
1914-1918 ..	11,822,743	4,419,174	37·4
1919-1923 ..	24,615,727	9,252,649	37·6
1924-1928 ..	23,875,578	8,305,764	34·8
1929-1933 ..	17,368,567	5,875,009	33·8
1934 ..	17,700,015	4,741,425	26·8

The year of maximum production was 1924 with a total value of £27,683,898.

During the same 36 years (1898-1933) the average annual value of the coal produced rose from £1,225,677 in the period 1898-1903 to £9,252,649 in the period 1919-1923, falling to £5,875,009 in the period just ended. The year of maximum value of production of coal was also 1924, with a value of £10,766,433. The ratio of the value of the coal production to that of all minerals including coal has ranged between 28·8 per cent. and 37·6 per cent. with an average value of 35·2 per cent. for the 7 periods (36 years) or 33·9 per cent. if 1934 be included. These figures illustrate vividly the value of the coal industry to India.

The variation in the annual value of the coal production of India is due, of course, partly to variations in the quantity of mineral won and partly to variations in market price per ton. This can be seen by comparing the figures of average annual value given above with the following figures of average annual production and average pit's mouth value per ton for the same periods :—

Annual production  
of coal.

Period.				Average annual production.	Average pit's mouth value per ton.
				Tons.	Rupees.
1898-1903	..	..	..	6,219,790	2-95
1904-1908	..	..	..	10,066,934	3-19
1909-1913	..	..	..	13,509,472	3-30
1914-1918	..	..	..	17,951,583	3-69
1919-1923	..	..	..	19,712,213	6-25
1924-1928	..	..	..	21,540,607	5-21
1929-1933	..	..	..	21,776,153	3-61
1934	..	..	..	22,057,447	2-86
Years of maximum production —					
1919	..	..	..	22,628,037	4-50
1930	..	..	..	23,418,734	3-875
Year of maximum price—					
1922	..	..	..	19,010,986	7-69

From a study of these figures it is seen that the increase in the total annual value from 1898 to 1918 is due mainly to large increases in the quantity of coal produced aided by a slowly rising value per ton. During the next period 1919 to 1923, there was a proportionately smaller increase in the average annual production but an enormous increase in value of the annual coal production due mainly to a very great increase in price, which reached its maximum in 1922 at Rs. 7-69 per ton. The high prices during this period were at least in part due to wagon shortage. Since then the value of the total coal production has fallen steadily due to falling prices per ton on a roughly steady output, averaging 21½ to 22 million tons from 1924 to 1934.

Now this great increase in the average annual output of coal from 6-2 million tons in the period 1898-1903 to 21-5 million tons in the period 1924-1928, or from 4-6 million tons in 1898 to 22-6 million tons in 1919, has meant great activity in the development of already opened coalfields, particularly of the Jharia and Raniganj fields, and of the building of railways to new fields that were not producers at the beginning of the period under discussion. The new fields developed have been Pench Valley (1903), Ballarpur (1904), Bokaro (1909), Rampur (1910), Jainti (1915), Sasti (1920), Sohagpur (1921), Talcher (1923), Karanpura (1925), Korea (1930), Tandur (1931).

In retrospect it is evident that the rapid expansion in the demand for Indian coal that prevailed up to 1919 when the output reached 22-6 million tons was not to continue, for the production of 1934

was only 22.1 million tons. And as the coalfields of India opened in 1919 were able to cope with the existing requirements as well as to develop for the future, the coalfields that have been developed since this date, six in number, have caused a position of potential over-production. As these six coalfields between them were responsible for the production of over  $1\frac{1}{2}$  (1.54) million tons in 1934, whilst the five fields opened between 1903 and 1915 have increased their production by over  $1\frac{1}{2}$  (1.58) million tons between 1919 and 1934, we have a statistical reason for the depression in the coalfields of Bengal and Bihar and Orissa of recent years. Irrespective of source, the total output of coal in India for the 36 years, 1898 to 1933, has been 553,883,760 million tons or 575,941,207 tons to the end of 1934, or probably nearly 600,000,000 tons to the end of 1935.

What is of great concern to us is the effect of these factors upon the available reserves of coal in India. This problem has been a matter of concern both to the Government of India and to the public in India for some years and has been in particular a matter of study by the Geological Survey of India ; for it is common knowledge that the methods of work in many of the coal mines in India have for many years been such as do not commend themselves to geologists and competent mining engineers. And the tales of fire, flood and subsidence from the Jharia coalfield in particular and the evidence visible to all in the shape of pillars of cloud by day and of fire by night show that the extraction of some 600 million tons of coal between 1898 and the end of 1935 must have meant the depletion of available reserves to a vastly larger extent.

The Government of India became aware of the situation in the coalfields of Bengal and Bihar and Orissa as long ago as 1917 and engaged a competent Mining Engineer from England, Mr. R. I. Treharne Rees, to report on the position, which he did in 1919.<sup>1</sup> Mr. Rees directed his attention to four problems :—

- (1) Methods of extraction,
- (2) The generation of power at the collieries,
- (3) Coking,
- (4) Handling and despatch of coal at the collieries,

and found that considerable economy could be effected under each head. As improvements under (2), (3) and (4) would apply only to the coal extracted from the ground, it was evident that the principal necessity was to improve the methods of extraction and decrease the very serious losses that Mr. Rees reported as

<sup>1</sup> 'Report on the Methods of Coal Mining in India', pp. 1-12 with Appendix on Hydraulic Stowing, pp. 1-5, Calcutta, (1919).

existing. To effect this Mr. Rees advocated the extensive introduction of hydraulic stowing in the Jharia and Raniganj coalfields, and wrote a special appendix to his report on this method, in which he estimated that in the case of new workings where the coal was not already cut into pillars the cost of sand stowing would be from 10 to 14 annas per ton of coal whilst in the case of extracting pillars already formed, it would be 16 to 20 annas per ton.

For those not versed in mining practice I should explain that the majority of the Indian coal mines are worked on the bord and pillar system, in accordance with which a seam is opened up by driving galleries in two sets at right angles isolating rectangular pillars left to support the roof. These pillars may contain 50 to 60 per cent. of the coal in the seam, and the coal they contain cannot be extracted without the roof falling in, unless the galleries are packed with rock or sand. The filling of the voids with sand or rock either by hand or by flushing in with water is known as stowing, usually hydraulic stowing.

As a result of Mr. Treharne Rees' report the Government of India appointed a strong Committee known as the Coalfields Committee containing amongst its members the Chief Inspector of Mines, the Director, Geological Survey of India, the Mining Engineer to the Railway Board, nominees of the Indian Mining Association and the Indian Mining Federation, a representative of the Zamindars and of an Agency firm in Calcutta, the Committee being under the Chairmanship of the Commissioner of Chota Nagpur Division, with a Civilian Secretary (Mr. L. B. Burrows). In appointing this Committee the Government of India referred to Mr. Treharne Rees' report in the following terms :—

'The principal recommendations of Mr. Treharne Rees relate to the appointment of an inspecting and controlling authority for the supervision of the terms of leases, more efficient methods of coal extraction, including rotation of working and hydraulic stowage, the improvement of the conditions of colliery labour, the more economic use of power and more general employment of electricity, the improvement of methods of cokemaking, the introduction of coal mixing, the handling and despatch of coal, more extended employment of screening, and the possibilities of the manufacture of briquettes.'

The Coal Committee reported in 1920<sup>1</sup> and in their report recommended State control of the industry. The Coal Committee, visualising the possibility that the increase in India's annual output of coal from 5 million tons to 20 millions in 20 years would continue at the same rate, so that the output would be over 50 million tons by 1935, wrote (p. 19) :—

<sup>1</sup> Report of the Coalfields Committee, pp. 1 to 199, Calcutta, (1919).

‘ Unless her resources are strictly conserved and the use of coal of lower grade substituted, wherever possible, for that of the better coking qualities, India may be faced at no very distant date with the loss of her metallurgical industries for want of coke.’

Actually, as already noticed, the expected expansion of output has not taken place ; none the less the passage quoted is true, and the danger has been much magnified by the passage of years.

The principal conclusions of the Coal Committee were (p. 30) :—

‘ (1) That no improvement in the present wasteful methods can be expected without State interference, that such interference should take the form of a controlling authority with legal powers designed to ensure conservation and economic extraction, and that such authority should consist of a new Government department and a board sitting in Calcutta.

(2) That a steady and sufficient supply of wagons, with the requisite facilities for moving them, is the most urgent need of the industry.

(3) That sand-stowing should be made compulsory within certain limits and with provision for compensation, and that funds for the purpose should be raised by a cess and a duty of eight annas a ton on all coke and coal ; that the cess should be imposed as soon as possible, be collected by the railway companies on despatches, and be administered by the controlling authority.’

From both Mr. Treharne Rees’ report and that of the Coal Committee it appeared that the minimum amount of coal being left in the ground was 33 per cent., although to some it appeared that this figure was conservative and that the waste underground was greater. The question of wagon supply has long been rectified, but no action has been taken on recommendations (1) and (3) of the Coal Committee’s principal conclusions.

The Government of India did, however, issue in 1921 a letter to Local Governments, Mining Associations, Chambers of Commerce, and other interested bodies, in which the Government of India gave their provisional conclusions regarding the recommendations of the Coal Committee.

In their replies to this letter one or other of the various bodies consulted objected to almost every conclusion of the Government of India, and as a result the Government took no action on the report of the Coal Committee. I am betraying no secret when I mention that the principal reasons why the Government of India did not take action on the Coal Committee’s report were the facts that we did not know definitely the extent of the coal reserves of India of higher grade and therefore the seriousness of the admitted losses in working *vis-a-vis* the available reserves, nor did we know the extent to which it would be possible by methods of washing to improve the lower grade coals. These problems and the question of the reserves of sand available for stowing were therefore entrusted to the Geological Survey of India for examination. It was soon shown that no help was to be expected from processes of beneficiating

lower grade coals,<sup>1</sup> and that the supplies of sand available for sand-stowing were adequate.<sup>2</sup> Further, Sir Edwin Pascoe decided

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Geological Survey of  
India.

to institute a resurvey of the Jharia and Raniganj coalfields and a re-examination of all the other fields, and in 1925 formed a special Coalfields Party of the Geological Survey of India under the superintendence of Dr. C. S. Fox. This was necessarily a long task, and has already led to the publication of 5 memoirs, one from the pen of Mr. E. R. Gee, and the remainder by Dr. Fox, with one memoir still to come. With the completion of Dr. Fox's memoir on 'The Lower Gondwana Coalfields of India',<sup>3</sup> the views of the Geological Survey of India on the available reserves of coal of all qualities in India were placed before the public. Dr. Fox's estimates were, of course, available to Government before this, and after the Government of India had rejected the coal restriction scheme proposed by the mining community in 1934, I was asked, as the then Director, Geological Survey of India, to prepare for publication a note on Indian coal reserves, in order to educate public opinion in India on the seriousness of the situation prior to the introduction by Government of measures of conservation, which, it is no secret, the Government of India have in preparation.

My note has been published as No. 54, *Bulletin of Industries and Labour*, issued in July 1935; and also,

Note on 'India's  
Coal Resources'.

in order to ensure wider publicity, in the *Records of the Geological Survey of India*.<sup>4</sup> The data assembled in this note were collected in 1933, and represent the position as it stood at the end of 1932.

The object of the publication of this note was to draw public attention to the alarming position that is rapidly being created in India owing to the methods of work in Indian coal-fields, especially in Jharia. It was shown in this note, for instance, that if active measures were not undertaken to improve the methods of work in the Jharia field, this field would be exhausted in 33 years (from 1932) as a maximum, instead of lasting 80 years as was otherwise possible. My note has so far failed in its purpose in that two of the leading journals of Calcutta, the *Statesman* and *Capital*, each missed the main point. They both referred to my estimate that the 4,500 million tons of coal of good

<sup>1</sup> W. Randall, 'Froth Flotation of Indian Coals', *Rec. Geol. Surv. Ind.*, LVI, pp. 220-229, (1926).

<sup>2</sup> G. V. Hobson, 'Sand Supply in the Upper Damodar River', *Trans. Min. Geol. Inst. Ind.*, XXI, pp. 321-337, (1927). See also C. S. Fox, 'The Jharia Coalfield', *Mem. Geol. Surv. Ind.*, LXI, pp. 105-107, (1930); and E. R. Gee, 'The Geology and Coal Resources of the Raniganj Coalfield', *op. cit.*, LXI, pp. 298-302, (1932).

<sup>3</sup> *Op. cit.*, LIX, (1934).

<sup>4</sup> 'India's Coal Resources (Being a Note on the Reserves available in India of Good Quality Coal, Including Coking Coal)', *Rec. Geol. Surv. Ind.*, LXIX, pp. 336-352, (1935).

quality would be exhausted in 100 years if we allow for a recovery of 50 per cent. only, and an average annual production of only 22,500,000 tons ; or in 75 years, if the future average annual extraction be 30 million tons. But neither journal mentions the much more serious fact that the 1,700 million tons of coking coal so essential to the existence of the iron and steel industry will last on the average only 33 years from 1932, at the present rate of extraction, and with a recovery of 50 per cent. ; but that such coal would last 80 years if, with sand-stowing, the extraction were improved to 80 per cent. It is because of my failure in the note mentioned to impress the public with the seriousness of the situation that I have decided to utilise the present occasion again to discuss coal reserves.

It is necessary here to give only a résumé of my note. The data in it are based largely on Dr. Fox's memoir on 'The Lower Gondwana Coalfields of India' already referred to.

According to Dr. Fox, the quantities of coal of all qualities in the Gondwana coalfields, which are responsible for 98 per cent. of India's coal output, are 60,000 million tons ; of which 25,000 million tons occur in the Damodar Valley coalfields, namely the Raniganj, Jharia, Bokaro, and Karanpura coalfields. If we restrict the totals to include only those seams over 4 feet thick and averaging 20 per cent. of ash (not exceeding 25 per cent. ash on a moisture-free basis) and lying within 1,000 feet of the surface, then, according to Dr. Fox, these estimates fall to 20,000 million tons, of which 10,000 tons lie in the Damodar Valley coalfields. Dr. Fox next forms estimates of coal of good quality, taking into account only seams of upwards of 4 feet in thickness and with ash not exceeding 16 per cent. on a moisture-free basis.

Because of the better grade of coal considered, he takes into account coal down to a depth of 2,000 feet. This leads to a total of 5,000 million tons, of which 3,150 million tons lie in the Jharia and Raniganj fields. This 5,000 million tons can be split up into—

3,500 million tons at	0 to 1,000 feet from the surface.
1,500     "     "     "	1,000 to 2,000     "     "     "     "

Of this, the 3,500 million tons is included in Dr. Fox's total of 20,000 million tons.

After considering carefully Dr. Fox's estimates for the various fields and modifying his figures for the Bokaro and Karanpura fields, I find we can still reckon on a total of 4,500 million tons of coal of good quality.

I have already brought to your notice that the earlier anticipations of expansion of the Indian coal industry have not been realised, and that the industry has been practically stationary from 1919 to 1934.

If we assume no further growth in the industry and an average annual consumption of 22,500,000 tons, the 4,500 million tons referred to above would last for 200 years, if 100 per cent. extraction were secured. Judging, however, from the data given in Dr. Fox's memoir, unless something effective is done to cause an alteration in the system of working coal in India, not more than 50 per cent. and probably less of this coal will, in fact, be brought to the surface. This means that without allowing for any growth in the coal industry of India, reserves of good quality coal will be exhausted in 100 years. This is a position which the nation cannot contemplate with equanimity.<sup>1</sup>

If, however, we assume that when the present world depression ceases India will resume her industrial progress, we must, even after allowing for the increasing competition of water power, oil fuel and petrol as sources of energy, assume a substantial growth in India's consumption of coal. On an average consumption of coal at the rate of 30 million tons annually, 4,500 million tons of coal would last 150 years with a 100 per cent. extraction, 75 years if only 50 per cent. of the coal be won.

In these last two paragraphs I show the position that would arise if all demands were met from coal of good quality only. This, of course, will not happen; but, in practice, market and technical considerations cause by far the greater portion of India's requirements to be met from her supplies of coal of good quality. If we could assume an average supply in the future of 20 per cent. of our requirements from second-class coals, and 80 per cent. from first-class coals, the saving in first-class coal would prolong the periods mentioned in the previous two paragraphs by 25 per cent. Should average higher prices for coal prevail in the future than in recent years, then the proportion of second-class coal worked would increase, with a corresponding prolongation of the periods mentioned in the two previous paragraphs.

As is well known, India is the possessor of enormous supplies of iron-ore of the very highest quality, estimated for the iron-ore fields of Bihar and Orissa alone as of the order of 3,000 million tons. (There are also vast quantities of iron-ore in other parts of India.) To smelt this ore by methods at present in vogue, the use of high-quality metallurgical coke is necessary, in the proportion, stated roughly in terms of original coal, of 1 ton of coal to 1 ton of iron-ore smelted. This means that if India is to take the position in the world as a smelter of iron and steel that appears justified by her reserves of high grade iron-ore, we should be able to see in India available for the use of this industry not less than 3,000 million tons of good quality coal suitable for

<sup>1</sup> This is the figure seized upon by the *Statesman* and *Capital* and regarded with comparative placency instead of the much more alarming figure of coking coal to be noticed later.



the manufacture of metallurgical coke, that is to say, a greater amount of good coking coal than the total of all the good quality coal—coking and non-coking—that will be extracted if present methods of work are continued.

It is important, therefore, to see what proportion of the 4,500 million tons of coal of good quality referred to above can be regarded as suitable for the preparation of metallurgical coke. Dr. Fox gives figures totalling to 1,500 million tons in the Giridih, Raniganj, Jharia, and Bokaro coalfields. This total, in my opinion, could be increased to 1,694 million tons or say 1,700 million tons, as at the end of 1932. The following table shows the reserves of good quality coking and non-coking coal in India at the end of 1932 :—

## Reserves of good quality coking and non-coking coal in India at the end of 1932.

(In millions of tons.)

Coalfields.	Authority.	Coking coal of superior quality.		Non-coking coal of superior quality.		Total coking and non-coking coal.
		0-1,000 feet.	1,000-2,000 feet.	0-1,000 feet.	1,000-2,000 feet.	
Girdih	Saigo	38	..	..	..	38
Raniganj	Gee	73	168	953	607	1,801
Jharia	Fox	737	163	298	52	1,250
Bokaro	Fernor and Whitworth	270	245	7	..	522
		1,118	576	1,258	659	
TOTAL	....	1,694		1,917		3,611
Karanpura* (N. and S.)	Spencer	..	..	Non-coking coal of superior quality. 530*		550
Hutar, Jhullia, Burhar	Fox	..	..			50
Kurasia, Jhilmilli, etc.	..	..	..			30
Tacher to Korba	..	..	..			200
Kanhan-Pench	..	..	..			30
Ballarpur-Singareni	..	..	..	..	50	50
TOTAL	..	..	..	910		910
Total coking and non-coking coal	..	1,694		2,827		4,521

\* Of which 350 million tons assumed to be semi-coking and 200 million tons non-coking.

It will be seen that the total quantity of coking coal suitable for the manufacture of metallurgical coke at the end of 1932 may be taken as follows :—

At depths of 0 to 1,000 feet	..	..	1,118 million tons.
At depths of 1,000 to 2,000 feet	..	..	576 „ „

TOTAL .. 1,694 million tons.

No doubt small additional quantities of good coking coal will be discovered in the future, possibly, for example, in West Bokaro ; but the probable amounts are not likely seriously to alter the problem, and in the total of 1,694 million tons given above, say, 1,700 million tons, we have almost certainly arrived at a figure which is not very far from the truth.

In addition, technical research may show that by blending with strongly coking coals, coals not at present regarded as coking coals, such as the semi-coking coals of Karanpura, may become available to the iron and steel industry. But no allowance can be made for such possibilities, which, after all, are only possibilities.

According to our present knowledge, the best coking coals of India are in the Giridih and Jharia fields. A proportion of the Giridih coal, 9 million tons according to Dr. Fox, is of extra special quality due to its very low phosphorus content. Such coal is suitable for very special metallurgical purposes, such as in the manufacture of ferro-manganese for export, for such alloy must not contain more than a definite amount of phosphorus if it is to compete in the world's markets. This coal is, in fact, the only known coal in India suitable for such manufacture. The Tata Iron and Steel Company manufactures ferro-manganese for its own purposes, but, as this alloy is not for export, the company does not find it necessary to work to the same stringent limits in phosphorus contents as would otherwise be necessary, and, therefore, does not make a claim upon the special coal from Giridih. There is, at the present time, in fact, no existing metallurgical industry in India that demands this coal, and this very special coal is instead being extracted and consumed for railway purposes for which so much other coal is suitable.

Apart from Giridih, which is only a small field, the best coking coal in India is in the Bhagaband and Jialgara stages of the Jharia field. The total amount of such coal, according to Dr. Fox's estimate, is 737 million tons down to 1,000 feet from the surface, with an additional amount of 163 million tons between 1,000 and 2,000 feet. Work at present is practically confined to the upper thousand feet. According to Dr. Fox, with the present methods of work, not more than 50 per cent. of this coal will be won, and the remainder will be lost due to

collapses, fires, and floods. The total annual extraction from Jharia during the past 10 years has been about  $10\frac{1}{4}$  million tons annually. Of this, according to Dr. Fox, from 8 to 10 million tons come yearly from the Bhagaband and Jialgara stages in which all the best coking coal is concentrated. Taking an average figure of 9 million tons, we get the life of the coking coals of the Jharia field down to 1,000 feet from the surface as—

$$\frac{737}{2} \times \frac{1}{9} = 41 \text{ years}$$

if present methods of mining be not radically improved. Forty-one years is, however, in excess of the truth. According to Mr. R. R. Simpson in 1929<sup>1</sup>—

‘It is estimated that at the present time there are not less than 120 million tons of first class coal standing in pillars which it is impossible to extract by the ordinary method of mining. Partly included in this figure, but largely in addition, there is the great quantity (some hundreds of millions of tons) of coal which cannot be worked by the ordinary methods owing to the necessity for providing underground support for rivers, roads and the network of railways which covers the coalfields.’

Allowing for the extraction since 1929, namely in 1930, 1931 and 1932, of another 27 million tons from these two stages in the Jharia field, we can estimate that at a minimum another 30 million tons of coal has been left standing in pillars, so that allowing for such pillar extraction as has taken place, and pillared coal lost in fires and collapses, and no longer included in the calculated reserves, we can safely place the present quantity of coal standing in pillars at not less than 137 million tons. Nearly 100 per cent. of this will be lost unless some form of stowing is resorted to. This means that, without stowing, our reserves are only  $737 - 137 = 600$  million tons. This quantity corresponds to a life for the Jharia field, if present practice be not revised, of only—

$$\frac{600}{2} \times \frac{1}{9} = 33 \text{ years}^2$$

a period so trivial as to be equalled by the period of service of, say, a Government servant.

This figure, though not identical with, is of the same order of magnitude as other gloomy predictions of recent years.

<sup>1</sup> ‘The future of the Jharia Coalfield’, *Trans. Mon. Geol. Inst. Ind.*, Vol. XXIV, page 111. Mr. Barraclough’s figures at the end of 1927 was 131 million tons.

<sup>2</sup> Mr. N. Barraclough’s estimate is a life of 68 years from 1927 for the Jharia field based on certain calculations. But he goes on to show that this is an exceedingly optimistic figure unless sand-stowing be adopted, *Rec. Geol. Surv. Ind.*, LXII, p. 382. Also see Mr. Barraclough’s paper ‘Coal lost by Fires and Collapses in Indian Coal Mines’, *Rec. Geol. Surv. Ind.*, LXII, pp. 385-389, (1928).

An extraction of 100 per cent. of 737 million tons at 9 million tons a year gives an 82-year life for the coking coals of the Jharia field. A 50 per cent. extraction gives a 33-year life. These are the limits. In addition there is the coal between 1,000 and 2,000 feet, namely 163 million tons of coking coal. At 100 per cent. extraction, this adds 18 years to the life, making a total of 100 years. At 50 per cent. extraction, for the coal between 0 to 1,000 feet, the coal between 1,000 and 2,000 feet cannot be taken as adding anything to the reserves, because with a 50 per cent. extraction only of the coals above 1,000 feet, the companies and the field would be involved in such losses due to collapses, fires and floods that much of the deeper coals will be rendered either physically or economically unworkable.

Without sand-stowing and with a *continuance of only the present average rate of extraction*, we can, therefore, put the life of the Jharia field at some 33 years from the end of 1932, now already reduced to 30 years. With stowing it will be somewhere between 33 and 100 years according to the extent to which this process is adopted. If, as a result of sand-stowing, the extraction could be improved from 50 per cent. to 80 per cent., the life of the field would be 80 years, that is, more than double what it would be otherwise.

As it is important to ascertain the extent to which India's reserves of coking coal are being used for one of the principal purposes for which they have been fitted by Nature, I took the figures of production for the 11 years, 1922 to 1932, and estimated that the amount of good quality coking coal removed annually from the four fields in question was :—

	Tons.
Girdih (at 100 per cent. of output)	735,000
Raniganj (at 30 per cent. of output)	1,870,000
Jharia (at 85 per cent. of output)	8,753,000
Bokaro (at 100 per cent. of output)	1,595,000
TOTAL	12,953,000

By correspondence with known producers, I obtained the amount of coal used for the preparation of hard coke during 1931 and 1932, and the amount of coke manufactured. The figures are :—

		1931.	1932.
		Tons.	Tons.
Total coke manufactured	..	1,309,308	1,214,526
Coal used	..	1,754,469	1,635,972
Percentage recovery	..	74·74	74·72

	1931 Tons.	1932 Tons.
Source of coal used—		
Jharia field	1,687,681	1,585,733
Giridih field	33,209	32,724
Bokaro field	21,123	4,637
Raiganj field	12,456	12,878
<b>TOTAL</b>	<b>1,754,469</b>	<b>1,635,972</b>
Amount used by the three iron and steel smelting companies	1,341,055	1,322,969
Amount used by others	413,414	313,003

From this statement we see that almost the whole of the hard coke of India is made from Jharia coal. The only exceptions are the use of Giridih coal in the coke ovens at Giridih by the East Indian Railway and the use by the Indian Iron and Steel Company of a small quantity of Bokaro and Raniganj coal (the Chanch seam) and a trivial quantity of Giridih coal in blends with Jharia coal.

The ratio that these figures of consumption of coking coal bear to the production of the respective fields in coking coal is shown below —

	1931.		1932	
	Total pro- duction of coking coal. Tons.	Consumed in coke making Tons	Total pro- duction of coking coal Tons	Consumed in coke making. Tons
Giridih	713,133	33,209	583,243	32,724
Raiganj	1,960,000	12,456	1,925,000	12,878
Jharia	8,292,000	1,687,681	7,269,000	158,573
Bokaro	1,656,397	21,123	1,348,973	4,637
<b>TOTAL</b>	<b>12,621,730</b>	<b>1,754,469</b>	<b>11,126,216</b>	<b>1,635,972</b>

From these figures it is seen that of the total amount of coal won in India in 1931 and 1932 suitable for the manufacture of metallurgical coke, only 13.9 and 14.7 per cent respectively were used in the manufacture of hard coke. If we adopt Dr. Fox's view that without stowing only 50 per cent. of the coal will be won, then the percentage of coal used in the manufacture of hard coke falls to 6.9 and 7.3 per cent. of the coal extracted, immobilised and wasted underground.

From these figures we also see that with a 50 per cent. loss, nearly 25 million tons in 1931 and 22 million tons in 1932 of good coking coal were consumed, immobilised or wasted underground, with the supply for the manufacture of hard coke of only 1½ million tons in 1931 and 1½ million tons in 1932, the balance being put to other uses.

These figures also show the overwhelming extent to which the manufacturers of hard coke rely upon the Jharia

coalfield. Of the coal used in the manufacture of hard coke in 1931 and 1932, 96·2 per cent. and 96·8 per cent. respectively were derived from the Jharia field. This must be taken as an index of the superiority of the Jharia coal for this purpose over the other coals, except the small Giridih field. The Raniganj coal has in the main to be mixed with Jharia coal, and the Bokaro coal is higher in ash contents.

Except in so far as the existing iron and steel companies have secured and reserved to themselves adequate portions of the Jharia coalfield, the Jharia coking coals will be exhausted at the end of the period of 33 years, estimated above, unless there is improvement in mining practice; the iron and steel industry will then have to rely upon Bokaro coal and admixtures of Bokaro coal with such Raniganj coals as are still available, and perhaps with semi-coking coals from Karanpura. I have made this qualifying remark with reference to Raniganj coals, because the major portion of the coking coal of this field is in the Dishergarh seam, which is the most valuable steam coal in India and is in great demand for railway purposes and the bunkering of ships. The figures of 33 years given above are based on the premise that extraction continues at the same rate and under the same conditions as before. I understand, however, that the existing iron and steel companies have secured control of substantial sections of the Jharia coalfield. Such companies will doubtless in their own interests use improved methods of work and also extract their coal only at the rate necessary for their own operations. As a result the life of these portions of the field will be prolonged, whilst that of the remainder will be less than 33 years, unless the rate of annual production is reduced, or improved methods of work introduced.

It will be observed that I have reduced Dr. Fox's estimate of 5,000 million tons of good quality coal, both coking and non-coking, to 4,500 million tons, but have increased his estimate of 1,500 million tons of coking coal to 1,700 million tons. Dr. Fox's comment on this, made in his recent Presidential Address to the Mining and Geological Institute of India, is that I am being unduly optimistic, and that the position is very much worse.

Even if my figure of 1,700 million tons is correct, I agree with Dr. Fox that the position is actually much worse than can be deduced from these figures. The Jharia coalfield, as we all know, is now one vast honeycomb in the best seams, and even with stowing much coal that could otherwise have been recovered will be lost due to subsidence and fire. According to one report in the press, the strict accuracy of which I cannot vouch for, out of 133 working coal mines in Jharia about 42 are on fire, a statement that presumably means have portions on fire.

A further reason why the foregoing figures may prove to be unduly optimistic is, I regret to say, the unexpected effects of the operations of the Coal Grading Board. The Board was instituted for the purpose of helping the Bengal coal trade to recover lost export markets by ensuring that coal of uniformly high quality was offered for export. The scheme has been as successful as was possible, but it has had an unfortunate and unexpected repercussion due to two causes. The first is that the Indian Coal Grading Board adopted a method of grading coal different from that intended by the Coal Grading Board Act, 1935,<sup>1</sup> by basing their classification on analyses on a moisture-free basis. This is a more favourable treatment than the Act appears to have intended and must allot to many coals a considerably higher calorific value than the coal as used possesses, and consequently must, in many cases, allot a coal to a higher grade than would otherwise be the case, a matter to which I have already drawn attention.<sup>2</sup> The second cause is that the operations of the Indian Coal Grading Board have been extended far beyond the intended scope of the Act, namely to all coal of quality produced in the Damodar Valley coalfields instead of being restricted to coal actually shipped. This result was perhaps inevitable once it was decided to grade the coal seams themselves, instead of issuing certificates for cargoes as actually shipped. As a result thereof every coal owner, whether he was an exporter of coal or not, asked to have his seams graded. In practice this has meant not the grading of a seam as a whole, but section by section, so that instead of a seam being, say, first-grade as a whole, a portion of it was found to be of selected grade.

With the competition of the last few years and the continuous fall in the price of coal, the market has gradually concentrated on selected grade coal, which is now being sold at what must be regarded as rubbish prices. If a seam say 10 feet thick and on an average of first-grade contains a thickness of 4 feet of selected grade coal, this latter only may be worked, with the danger that the remaining 6 feet will never be worked at all. Consequently in addition to the recovery of say only 50 per cent. of those parts of seams that are worked, we have to contemplate the complete loss of the whole of the remainder. In the example given, the recovery on the whole seam would be only 20 per cent.

What are the remedies for this deplorable state of affairs in the Indian coal industry? Much has been written on this point, and I myself have given much thought thereto. I do not propose to enter

<sup>1</sup> See para. 24 of the Act.

<sup>2</sup> See *Rec. Geol. Surv. Ind.*, LXIII, pp. 190, 191, (1930).



into a discussion of all the possibilities, but only to state what appear to me to be the practicable and suitable remedies.

1. The first is that the lessors must be helped, in fact compelled, to look after their own interests, so that lessees are not allowed to work in such a manner that much of the coal that could be won is left underground. This means that the principles of good workmanship must be defined, and a Conservation Staff appointed to see that such methods are followed. As the mineral owners are not, as a rule, likely, for various reasons, to do this for themselves, it means Government intervention. The ideal method would be the formation of a new Government Department, a Coal Conservation Department [this is practically conclusion (1) of the Coalfields Committee]; but Government may find it easier to entrust the duties to the existing Mines Department.

2. Such improved methods will incidentally entail the extensive introduction of some method of stowing the voids, usually referred to as hydraulic stowing or sand-stowing. In most cases this cannot be done at present market prices, and the general opinion appears to be that sand-stowing will add on the average about one rupee per ton to the cost of mining the coal. The meaning of this is that with coal of the best quality now selling at Rs. 3 or under per ton, so that many companies can only just make a profit whilst many others cannot, even when making no provision for the extraction of pillar coal, that Rs. 4 per ton must be regarded as the minimum price per ton that coal of the best quality must fetch at the mines if the coal is to be worked in a workmanlike manner. The introduction of methods of conservation will in itself probably produce this necessary rise in price because it is obvious that, once improved methods are enforced, producers will not be able in many cases to sell at the present prices and will be compelled to withdraw from the market until remunerative prices are obtained.

3. There should be a change in the methods of grading coal so that certificates are issued only for coal as actually exported. This will entail the sampling and analysis of cargoes as shipped, the cost of which will be trivial in proportion to the value of the cargo. Such a method has long been in use for other minerals, e.g. manganese-ore, and must obviously be more satisfactory to the buyer. For with the present method of issuing certificates for seams or sections of seams in the ground, there is no guarantee that the purchaser receives what he has paid for. The purchaser of coal is really buying heat units, if the coal is to be used as fuel only, the purpose for which the major portion of the Indian coal is sold. As a purchaser I should

certainly wish to know the number of calories or heat units to be yielded by the coal purchased, and should therefore wish to buy on analysis; in fact I should prefer to buy on a sliding scale with a price based on a certain number of calories, and a certain ash and moisture percentage. I should expect to pay a bonus for calories in excess and for ash and moisture below the standard figure, and, on the other hand, to exact a penalty for calories in deficit and ash and moisture in excess. In fact, in my opinion, one of the necessary improvements in the coal trade is that coal should be sold on analysis of the coal as actually loaded or delivered with bonuses or penalties according to variations from the analysis agreed upon for the quoted price. Such a change would rapidly remove the disastrous effect of the present grading scheme in directing preferential attention to selected sections of seams, with resultant danger of complete loss of the remainder of the coal.

It will be asked whether railway traffic and industries generally can stand a minimum price of Rs. 4 per ton for coal that the welfare of the coal industry requires. One answer to this question is that if the coal industry does not receive a fair price now, the premature exhaustion of many valuable seams will inevitably lead to very much higher prices eventually, with resultant great hardship to Indian industries. That the price of the coal of Bengal, Bihar and Orissa is at present unduly low in proportion to railway freights will be seen when I mention a figure recently given to me of coal offered at Rs. 2-8 a ton in the Damodar Valley costing Rs. 12-8 delivered at Satna in Central India, so that the freight on one ton of coal to Satna would have been equivalent to the cost of 4 tons of coal. As coal is the motive power for railway traffic, this is equivalent to saying that to the public it costs 4 tons of coal to move one ton. Further when one recalls the price that is eventually paid for Bengal coal upcountry and at Bombay, it is evident that an increase in price of Re. 1 would be only a small proportionate increase, and that its adverse effect in competition with coal imported from abroad could be neutralised by a corresponding reduction in long distance railway or shipping freights. The fuel that is the motive power of railways appears to have some claim for special treatment, for without coal there would have been no railways.

I have suggested above that the Damodar Valley coalfields require a minimum price of Rs. 4 per ton for first-class coal. What this price would mean with reference to India's ability to pay can perhaps be judged from the figures shown in the following table in which the price is given in the final year of each of the periods represented in the table on page 5, that is to say, every 5 years :—

Production of Coal from India, Jharia and Raiganj, every 5 years from 1903 to 1933.

	Total production Tons.	Jharia		Raiganj		Jharia + Raiganj. Per cent of total.	All India value per ton Rupees
		Tons	Per cent of total	Tons	Per cent of total		
1903	7,438,386	2,493,729	33.53	3,066,720	41.23	74.76	2 10 0
1908	12,769,635	6,458,643	50.54	4,221,781	33.06	83.64	3 15 0
1913	16,208,009	8,608,310	53.11	5,327,248	32.57	85.98	3 8 0
1918	20,722,493	10,952,010	52.85	6,368,519	30.74	83.59	4 6 0
1923	19,656,883	10,346,015	52.63	5,557,424	28.28	60.91	7 7 0
1928	22,542,872	10,665,479	47.31	6,460,490	28.66	75.97	3 15 0
1933	19,789,163	8,014,949	40.50	6,265,703	31.66	72.16	3 1 6
1934	22,057,447	9,057,546	41.06	6,795,838	30.81	71.87	2 13 9

From this table you will see that the average value at pit's mouth of all-Indian coal increased steadily from Rs. 2-10 in 1903 to Rs. 4-6 in 1918, and Rs. 7-7 in 1923, falling to Rs. 3-1-6 in 1933, and finally to 2-13-9 in 1934. By 1934, prices had in fact fallen to the price of 31 years ago before the cost of so many items in the cost of production had increased ; and it seems quite evident that in 1934 a fair price to coal must be greater than that of 1903. Other columns of this table show the total production of coal in India for the selected years and also the production of Raniganj and Jharia coalfields separately, from which it will be seen that the production of these two fields rose from nearly 75 per cent. of the total in 1903 to nearly 86 per cent. in 1913, and has since fallen steadily to 72 per cent. Even with this reduced percentage the output of these two fields forms such a large proportion of the total that it is quite evident that the premature exhaustion of either of these fields will be a major calamity to the Indian coal mining industry. It is to be remembered that unless something is done to check present trends, the Jharia coalfield, which during the period reviewed has produced from 33 to 53 per cent. of the total Indian output, will be finished in less than 30 years, except in so far as smelting companies have secured portions of this field for their own purposes, in which case the remainder of the field will be exhausted still quicker.

Whilst recognising that the coal industry requires a higher price for coal in the interests not only of the industry, but also of the welfare of India as a whole, my personal anxiety has been that this increased price should not be obtained by the industry except in return for the *quid pro quo* of improved methods of work.

### III. CONCLUSION.

The Government of India are understood to have in hand a scheme for enforcing the conservation of coal in India. My plea to the coal industry is that when this scheme is made public, they do not proceed to decry every part of the scheme that affects them personally, as was done in 1922, but that instead they welcome the scheme as being in the best interests of all in the long run, and that they even invite Government to take a more effective line, if they consider that Government's proposals are not sufficiently far-reaching.

I hope the Society will consider that I have done well in making use of this occasion to draw public attention once more to this very serious question of the certain premature exhaustion of some of India's most valuable coal reserves if nothing effective is done to introduce improved methods of work in the Indian coalfields ; for in a relatively few years India will be faced with what will then be regarded as a national disaster of the first magnitude.

This evening my period of service as your President comes to an end. I am conscious that during my term of office I have not succeeded in effecting all the improvements I should have liked to effect: but this must be the experience of every retiring President. So I take this opportunity of thanking the Council and members of the Society for the encouraging support they have given during this very interesting period, which has included the 150th anniversary celebrations. And, finally, I hand over this Chair to my distinguished successor H.E. Sir John Anderson.

L. L. FERMOR.

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### ASIATIC SOCIETY OF BENGAL, 1936.

*Elected and announced in the Annual Meeting,  
3rd February, 1936.*

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## EXHIBITION ANNUAL MEETING.

### LIST OF EXHIBITS SHOWN AFTER THE ANNUAL MEETING OF THE ASIATIC SOCIETY OF BENGAL, ON THE 3RD FEBRUARY 1936.

#### 1. A. F. M. ABDUL ALI.

##### *Miscellaneous Historical Documents.*

- (1) List of Fees of the Chaplaincy of Fort William.

(Pub. O.C., 26 Oct., 1761, No. 3.)

- (2) Copy of letter from Lieut.-Col. Archibald Campbell and Major Henry Watson submitting proposals relative to the construction of docks, etc.

(Pub. Con., 27 Mar., 1770, Nos. 2(a), 3(a) and 4(a).)

- (3) Letter from Lieut.-Col. J. Fortnom, Chief Engineer, submitting the plans of Fort William.

(Pub. Con., 24 Mar., 1775, No. 1 )

- (4) Draft of a letter to Monsr. Chevalier, acquainting him with the provisions made for the subsistence of the Frenchmen at Chandernagore and for the disposal of the captured property, and requiring him to come to Calcutta, or to depart for Europe.

(Pub. Con., 2 Sep., 1778, No. 11.)

- (5) Letter from Messrs. T. Motte and E. Maxwell, Superintendents of Police, suggesting measures for reducing the high price of provisions, and enclosing a plan for regulating the wages of menial servants.

(Pub. Con., 3 Apr., 1786, Nos. 25-26.)

- (6) Proceedings of the Committee for enquiring into the causes of the scarcity of silver coin.

(Pub. Con., 6 Dec., 1787, No. 28.)

- (7) Copy of the proceedings of the vestry of St. John's regarding leasing the court-house to the Company.

(Pub. Con., 9 Feb., 1795, No. 2.)

- (8) Patna Massacre and Grant of the Diwani to E.I. Company.

(Photographic copies.)

- (9) Petition of the Greek inhabitants of Calcutta requesting permission to erect a chapel.

(Pub. Con., 11 Apr., 1774, No. 4.)

- (10) Copy of Proposals of Agreement of Nuhkossen and Gocul Gosaul to farm the Calcutta Town and Lands.

(Pub. Con., 20 Aug., 1767, No. 1.)

- (11) Letter from the Rev. J. Z. Kiernander, asking the Board to exempt the Protestant Mission buildings and burial ground from the payment of rent and taxes.

(Pub. Con., 1 Sep., 1777, No. 15.)

(12) Copy of a letter from the Commissioner of Police, transmitting a complete estimate of the value of all the shops, lands, houses, tenements and hereditaments in the town of Calcutta, as well as the assessment of a tax for the year 1781, intimating that for the present the full tax permitted by the ordinance must be levied, and requesting the Board to signify their approval of the assessment in writing.

(Pub. Con., 2 July, 1781, No. 1.)

(13) Letter from the Commissioners of Police, explaining why no tax had been previously levied on the houses of the Chowringhee quarter of Calcutta.

(Pub. Con., 4 Apr., 1787, No. 19.)

(14) Copy of a petition from some native inhabitants of Calcutta setting forth their grievances against the continuance of the assessment, and praying that Mr. Meyer may be authorized to submit a report on the allegations and that their grievances may be redressed.

(Pub. Con., 7 May, 1790, No. 6.)

(15) Petition from Ramgopal Babu and Giridhar Babu, on behalf of the native inhabitants of Calcutta, representing the hardships of the poor people on account of the rigorous enforcement of the collection of house tax in Calcutta, and soliciting redress.

(Pub. Con., 24 Aug., 1792, No. 17.)

## 2. ARCHÆOLOGICAL SURVEY OF INDIA.

### (1) *Terracottas from a big mound near Ghosi, Dist. Azamgarh, U.P.*

Bricks of Gupta and Mauryan period and coins, beads, etc. were also found in the mound which is reported to be fairly extensive and high. Ghosi, according to the Padma Purāna, was an important centre of pilgrimage. The height of the mound (which is reported to be from 40-50 feet) and its extensive area (about 117 bighas) indicate that it must be a large settlement continued over a considerable period. The terracottas were found in a confused and disturbed condition. Perhaps a fuller and most systematic exploration of the site might yield antiquities of a much earlier period.

### (2) *Navagrāma grant of the Mahārāja Hastin (G.E. [1]98) from Nagod State, C.I.*

The plate consists of the left half of the first of two plates forming the complete grant. The characters belong to the northern class of alphabets. The language is Sanskrit and the record is in prose. The plate records the grant of a village called Navagrāma in the *rāshtra* of the Pulinda chief (apparently a feudatory of the *nripati-paricrājakas*), by the Mahārāja Hastin in the year 98 (increased by 100). The donees were brahmins of the Parāśara-gōtra and Mādhyandina-śākha (of the white Yajurveda). The year 198 of the present plate must be considered to be the last date of Hastin whose successor Samkshobha issued the Betul grant in the year 199. The earliest known date of Hastin being 156, the year of his Khoh copper-plate, he must have enjoyed a long reign of over 42 years. The known dates of Hastin (156, 163, 191, and 198) and Samkshobha (199, 209) are to be referred to the Gupta era. The mention of MAHĀSVAYUJA-SAMVATŚARA with the Gupta year 198 enables us to fix the date of the present record within a narrow compass. The year 198



C.E. commenced on 9th March, 517 A.D., and the Mahāśvayujasamvatsara ended on or about the 23rd April, 517 A.D., and the present record must be dated within these limits. The missing month may be supplied as Chaitra (in which case the fortnight must be the bright fortnight) or Vaiśākha.

### (3) *Sculptures from Sārnāth.*

(i) Sandstone torso of a Yakṣi? or Chauri-bearer assigned to the Śuṅga times. Note crisp and close-fitting waist-girdle and atrophied waist which reminds one of Bharhut.

(ii) Statuette representing the Buddha. The figure displays all the serenity and deep calmness that characterize the best in the Sārnāth type of Buddhas. For sheer æsthetic appeal and overpowering divine inspiration the specimen stands unrivalled. 5th or 6th century A.D.

(iii) The hand of Buddha indicating *abhaya*, 'protection'. Interestingly enough it is painted red and the fingers display a delicacy and slenderness that bespeak the Buddha's universal compassion. 5th or 6th century A.D.

(iv) Bust of a female figure. Facial expression which is divine and indicative of composure points to the figure being that of a goddess. The figure reminds one of a figure of Tārā also from Sārnāth in the Indian Museum which it resembles closely and may be considered to date like the latter from the 8th century A.D.

### (4) *Inscribed Buddhist bronzes from the old Buddhist Vihāras at Negapatam, South India.*

Here are 13 such inscribed bronzes representing the Buddha, out of a huge find of about 300. From a study of the inscriptions on them their dates may be said to range from the 11th to the 15th centuries A.D. Buddhism was really flourishing at Negapatam as late as the 15th century A.D. Buddhists from Sumatra and Java settled down at Negapatam in the time of the Śailendras (9th century A.D.) and their religion was patronized by the Imperial Cholas (875-1250 A.D.).

The inscriptions on the bronzes exhibited can be translated as follows :-

1. (6931) *Udayāndālqa.*

'May He (the Lord) live and rule.'

Here we have a prayer that the Buddha should live and that his Dharma must prosper.

2. (6932) *Sokkar.*

'(The Lord, who is) Light.'

There is a reference here to the Buddha as the Supreme Light.

3. (6934) *Tiruvaraṅga Nāyakar.*

'The lay follower, Tiruvaraṅga.'

Here we have the donor's name who made the votive offering.

4. (6891) *Śāriyipillai Nāyakar.*

'The lay follower, Śāriyipillai.'

Śāriyipillai is the Tamil equivalent for Śāriputra. The donor is evidently named after Śāriputra.

5. (6908) *Āludai pillai.*

'[The lay follower], Āludai pillai.'

6. (6910) *Śaṅkāṇḍāl Nāyakar.*

'The lay follower, Śaṅkāṇḍāl.'

7. (6913) *Naṅgai piḷḷai Nāyakar.*  
'The lay follower, Naṅgai Piḷḷai.'  
Naṅgai Piḷḷai would mean 'son of the lady'.
8. (6916) *Ānandar Devar.*  
'The Deva Ānanda.'  
Here there is a reference to an Ānanda, some Buddhist Bhikshu, or head of the *vihāra*, who is called a Deva.
9. (Y) *Svasti Sṛi Tiruvinaṭi tulaṭi Periyamānālar.*  
'Hail, prosperity. The great bhikshu-devotee, the remover of sins and fate's workings.'  
The donor is evidently a bhikshu of eminence.
10. (6893) *Pālan malai yaṭi arai Devar.*  
'The Deva (bhikshu), the king of ascetics, from Pālanmalai.'  
The donor is a great bhikshu hailing from a hill called Pālanmalai, the whereabouts of which are unknown.
11. (6902) *Mulai Sīrama . . .*  
An incomplete inscription which speaks of a *Sramaṇa*, probably a donor.
12. (6915) *Ariyārar Nāyakar.*  
'The lay follower (H)arihara.'  
The donor is one Harihara (a Hindu name) who had evidently become a convert to Buddhism.
13. (6940) *Tillai.*  
This may be the name of a person. But usually by Tillai one will understand Chidambaram, a place of Hindu pilgrimage in S. India, the seat of Natarāja.

### 3. K. BISWAS.

*Some of the common plants of Bhutan including the recent collection of His Excellency Sir John Anderson, P.C., G.C.B., G.C.I.E., Governor of Bengal.*

Turner (1783) and Griffith (1838) are the two earliest collectors of Bhutan plants. Cooper of Edinburgh made some collections during 1914-1915. Collection of what was formerly within Bhutan territory up to Sinehula was made by me. But a substantial collection from the border of Western Bhutan up to an elevation of about 18,000 ft. has been made during last October by H.E. Sir John Anderson. The plants and illustrations exhibited are some of the species from these collections representing more or less different altitudinal zones.

### 4. L. BOGDANOV.

*A Persian (Isfahan) stencilled wall-hanging (qalamkār) said to represent the poet Hāfiẓ. Size: 6 feet, 3 inches by 11 feet, 1 inch.*

The poet is seen in the picture sitting on a chair, whilst two attendants, one male and one female, are holding behind him and his companion a curtain intended, obviously, to screen him from indiscreet eyes. A third attendant is sitting on the floor at the poet's feet holding a vessel with wine. In the background a hill with trees and buildings is roughly delineated. In the foreground at the poet's feet can be seen a tank with a swimming water-fowl. The whole is enclosed in a delicately traced treble border of floral designs. The

picture bears an inscription in the right-hand top-corner saying that it was made to order for Mirzā 'Alī al-Ḥākī in 1339 A.H. (= 1920 A.D.).

## 5. CHINTAHARAN (HAKRAVARTI).

*A number of Old Manuscripts in the Bengali Script.*

(1) Setubandha of Pravarasena (A.S.B. Cat. No. 5801) copied in Lakṣmaṇasaṃvat 102 (?) (1222 A.D.).

(2) Bhāṭṭikāvya (A.S.B. Cat. No. 5057) copied in Śaka 1326 (1404 A.D.).

(3) Bodhicaryāvatāra (A.S.B. Cat. No. 19) copied in Saṃvat 1492 (1435 A.D.).

(4) Prasannarāghava of Jayadeva (A.S.B. Cat. No. 5343) copied in Śaka 1414 (1492 A.D.).

(5) Dharmaratna of Jñātavāhana (A.S.B. Cat. No. 2653) copied at a date earlier than Śaka 1417 (1495 A.D.).

(6) Mitākṣarā of Viṇūneśvara (A.S.B. Cat. No. 1870) copied in Lakṣmaṇasaṃvat 399 (1519 A.D.).

(7) Śīsupālabadham (A.S.B. Cat. No. 5073) copied in Śaka 1436 (1514 A.D.).

(8) Kūṇṭārjunīya (A.S.B. Cat. No. 5039) copied in Śaka 1438 (1516 A.D.).

(9) Śūdrapaddhati of Apipāla (A.S.B. Cat. No. 2141) copied in Śaka 1442 (1520 A.D.).

(10) Śūdrapaddhati of Apipāla (A.S.B. Cat. No. 2142) copied in Śaka 1446 (1524 A.D.).

(11) Commentary on Rāvanabadha (A.S.B. Cat. No. 5802) copied in Śaka 1457 (1535 A.D.).

(12) Mahābhārata (Dronaparvan) (A.S.B.) estimated to be 400-500 years old.

(13) Kṛṣṇakirtana of the Library of the Vaṅgīya Sāhitya Pariṣat (supposed to have been copied towards the end of the 14th century).

(14) Harivaṃśa of the Library of the Vaṅgīya Sāhitya Pariṣat copied in Śaka 1387 (1465 A.D.).

(15) Mahābhārata (Ādiṣarvan) of the Library of the Vaṅgīya Sāhitya Pariṣat copied in Śaka 1422 (1500 A.D.).

(16) Raghuvaṃśam of Kālidāsa of the Library of the Vaṅgīya Sāhitya Pariṣat copied in Śaka 1452 (1530 A.D.).

## 6. SIR LEWIS L. FERMOR.

(1) *Carved Tibetan book cover.*

Group of mythological figures within an ornamental border. In the centre Avalokiteśvara. To the left Mañjuśhoṣa, to the right Vajrapāṇi. To the left of Mañjuśhoṣa, below, the Black Jambhala. To the right of Vajrapāṇi, below, the Yellow Jambhala. Round the central figure various representations of the Buddha showing different mudrās. In the upper row smaller representations of Śākyamuni, Maitreya, Aparimitāyū, Tārā and others.

(2) *A wooden glud-par or 'ransom-printer' from Tibet.*

Tibet is a magic-ridden country. In disease, trouble or perplexity the magician is called in to give his help. One of his operations

consists in making a kind of scapegoat-images from barley or wheat dough. By proper incantations and the required rituals the evil spirit is imprisoned in this cake to be thrown away. The 'ransom-printer' here exhibited shows on one side the twelve years of the Tibetan year-cycle. If the year is found to be malignant, its influence is also magically transferred to the ransom-cake and thrown away. Another side shows the various authors of misfortune, evil spirits of different kinds, to be dealt with in the same manner. The house of misfortune is also represented, as well as various animals, to be offered in effigy to the gods, a divination table, and other items used in the ritual.

## 7. GEOLOGICAL SURVEY OF INDIA.

### (1) *Miscellaneous collection of geological specimens.*

The exhibit this year is mainly of an economic nature.

A series of specimens, displayed on a flow sheet, illustrates the copper industry which, during the last 5 years, has become firmly established in Singhbhum. The stages of smelting, from the copper ore, are traced; most of the refined copper is smelted with zinc (obtained from Australia), to yield brass (or yellow metal) which is so readily absorbed in the Indian bazaars.

Part of the exhibit illustrates something of the iron and steel industry. Specimens of a furnace charge are displayed—hematite (iron-ore), limestone, and coke.

For comparison with artificial coke, a specimen of natural coke is shown—this has been found along a thin sill of igneous rock which was injected into a coal seam.

Two specimens of coal illustrate the various components of normal coal, and also the curious 'ball-coal' sometimes found in coal seams.

Specimens of kyanite and sillimanite are typical examples of these minerals which have assumed such an importance in the glass and refractory-ware industry.

A large specimen of lepidolite is from an occurrence only recently found in India by an officer of the Geological Survey. Lepidolite is the principal source of lithia.

Bauxite specimens are exhibited, showing their typical structure. India's resources in this ore of aluminum are enormous, and they have yet to be widely exploited.

The rock salt industry of the Punjab is represented by some crystals of rock salt also by three carvings from rock salt.

Quite a number of meteorites have fallen in India during recent months. They are represented here by three types: iron, stone, and stony-iron meteorites.

The specimens are suitably described by accompanying labels.

### (2) *Series of water-colour drawings.*

#### 1. *Mayo Salt Mines, Khewra (Punjab).*

Original water-colour drawing by A. B. Wynne, Geological Survey of India.

This water colour, made by Wynne during his survey of the Salt Range in the seventies of the last century, is illustrative of the type of scenery met with in that area.

The lower parts of the range are composed of the bright red Salt Marl, so prominently shown in this water colour. Within this red

marl of the Salt Mine hill just above Khewra village, seams of rock salt totalling at least 500 feet in thickness are included. These deposits have been exploited by mining since early historical times.

## 2. *Bhooj in Kutch.*

Original water-colour drawing by A. B. Wynne, Geological Survey of India.

This water colour, painted in 1869, shows the dipping Deccan trap and volcanic ash beds of Bhooj, which overlies steeply-dipping sandstones of Upper Jurassic age.

## 3. *The Girnar Peak from Datar hill.*

Original water-colour drawing by A. B. Wynne, Geological Survey of India.

The rugged hills illustrated in this painting are composed largely of gabbro.

## 8. S. L. HORA.

### *Drawings of the Aquarium Fishes of India.*

Quite a large number of Indian Aquarium fishes are highly prized in America and Europe but very little attention as hitherto been paid to these forms in this country. A set of drawings of these fishes in their natural colours and habitats has been prepared for exhibition in the Fish Gallery of the Indian Museum.

All the fishes exhibited here are found in ponds and pools in the neighbourhood of Calcutta and can be obtained without much difficulty. Generally, they can be kept in an aquarium with much less attention than the imported and more delicate 'Gold Fishes'.

## 9. M. HIDAYAT HUSAIN.

### *Tuḥfat al-Aḥbār fī Uṣūl al-Ḥadīth wa'l Akḥbār.*

This is an entirely unknown work on the Science of Ḥadīth in which the classification and criticism of Ḥadīth (the record of actions or sayings of the Prophet and his Companions) are described by al-Ḥāfiẓ Abū'l Mafāḥiṣ 'Abdallāh bin 'Abd ar-Raḥmān bin 'Abd al-Laṭīf al-Ḥusainī al-Wā'iẓ.

From the perusal of this work it appears that he was a pupil of eminent Muḥaddithīn (Traditionists) such as 'Abd ar-Raḥīm bin al-Husain al-'Irāqī (born A.H. 725, A.D. 1325, died A.H. 806, A.D. 1404), Shams ad-Dīn Abū'l Khair Muḥammad bin Muḥammad bin Muḥammad al-Jazarī (born A.H. 751, A.D. 1350, died A.H. 833, A.D. 1429), and Ḥayāth ad-Dīn Abū'l Khair 'Abd ar-Raḥmān (the father of the author).

He wrote the work at Kirmān and dedicated it to the Chief Justice of the city 'Abd al-'Azīz at-Tūrānpushtī. The work was completed in A.H. 830 (A.D. 1426).

He is also the author of another work on Ḥadīth called *al-Musalsal*. The *Musalsal* is a Ḥadīth (tradition) which can be traced through an unbroken chain of trustworthy authorities to a companion of the Prophet. It records that all the narrators handed

down the traditions in question by solemn oath as to its truth or by claspings hands with the hearers in token of good faith. The first method is called *Musalsal al-half*, the second *Musalsal al-yad*. Of this work also no copies seem to be known.

The copy of the work exhibited is written in a very fine Naskh by 'Abd ar-Rahmān al-Bahrāmī ash-Shirāzi.

No copy of the work is found in any public library in India and Europe, nor mentioned in any accessible bibliography.

It was purchased by Mr. Johan van Manen in Calcutta.

The sole value of the volume is not its rarity. Of still greater importance is the nature of its contents. The manner of treatment is methodical, scholarly, and original. It is difficult to explain how so important a work could have escaped the attention of students and bibliographers of *Ḥadīth*. Its discovery is of importance.

## 10. JOHAN VAN MANEN.

### *Some Tibetan Tankas.*

Of late years increasing interest has been shown in Tibetan scroll-paintings, or tankas. G. de Roerich has in 1925 published a valuable monograph on the subject in which a large number of such tankas were reproduced. An appreciable amount of material on the subject is now available in print. The statement made in 1925 that 'our present knowledge of Tibetan pictorial art is not sufficient to enable us to discuss various schools of art' remains true.

It is, nevertheless, possible to discuss special points which from time to time arise. The purpose of this exhibit is to draw attention to a style of painting of a very distinct character, of which the examples known to the exhibitor are of a high artistic quality. The style is different from that of the majority of tankas, which are executed in a great variety of colours on the same scroll, and is limited to the use of a black background with all outlines in thin gold lines and the use of only red, or red and white, to colour clothing and skin.

A few samples are exhibited, showing various stages of development, and for purposes of comparison samples of the more common type of tanka are placed in juxtaposition.

## 11. J. N. MUKHERJEE, S. R. PALIT, and B. R. MAZUMDAR.

### *Displacement of equilibrium at interfaces.*

The displacement of the equilibrium in an aqueous solution when shaken with an immiscible solvent can be easily illustrated by using solutions of suitable indicators. The development of acid and alkaline reactions by the double decomposition of neutral salts of strong acids and bases is also illustrated by simple reactions.

## 12. BARON W. OW-WACHENDORF.

### (1) *The Buddha, representing the miracle of Sravasti, flames issuing from both shoulders.*

Grey schist. Found in tribal territory north of Rawalpindi. About 150 A.D.

### (2) *Stone Head of a female Goddess.*

Red sandstone. From the Central Provinces. About 500 A.D.

(3) *Crowned figure sitting on a throne. Second figure missing.*

Bronze. Rare specimen from the Kulu Valley. Early VIIIth century A.D.

(4-5) *Two figures, Vishnu and Lakshmi.*

Copper bronze. IXth and XIth centuries A.D. Similar to the Kurkihar and Nalanda Bronzes. Undoubtedly school of Bihar. Found at top of Manikiala Stupa near Rawalpindi.

## 13. GANAPATI SIRCAR.

*A Copper Inscription from Nandapur.*

On the east bank of the Ganges there is a village, Nandapur, two miles from Surajgarh, Monghyr, in Bihar. In this village, on the Ganges, there is a very old dilapidated temple, known as the temple of 'Burha Siva'. One portion of it has already been washed away by the Ganges and the remaining portion may go down any time. In this portion, fixed in a wall, this copper inscription was discovered. Mr. U. Ghose sent it to the exhibitor in February, 1929.

Length—6½ inches, with its head about 8 inches. Breadth—4½ inches. Character—Gupta Period. This inscription, not yet deciphered, is exhibited for the first time. Written on both sides—in front 15 lines, on the reverse 4 lines.

## 14. THE GENERAL SECRETARY.

(1) *The Society's publications of 1935.*

- (a) Journal and Proceedings.
- (b) Memoirs.
- (c) Advance Proceedings.
- (d) Bibliotheca Indica.
- (e) Proceedings, Indian Science Congress.

(2) *Some acquisitions of interest to the Library during 1935.*

- (a) Presentations.
- (b) Purchases.

(3) *Some recent publications by Members of the Society.*

- (a) Caland, W: The Kāthakagrihya-sūtra. Lahore, 1925.
- (b) Chakravarti, Sukumar: Caitanya et sa théorie de l'amour divin. Paris, 1933.
- (c) Chakravarti, Chintaharan: A Descriptive Catalogue of the Sanskrit Manuscripts in the Vangiya Sahitya Parishat. Calcutta, 1935.
- (d) Law, Bimala Churn: Śrāvasti in Indian Literature (Mem. Arch. Surv. India, No. 50). Delhi, 1935.
- (e) Konow, Sten: Saka Studies (Oslo Etnograf. Mus., Bull. 5). Oslo, 1932.
- (f) Bodding, P. O.: A Santal Dictionary. Vol. 2. Oslo, 1934.
- (g) Woolner, A. C.: The Jasmine Garland (Kundamala). Translated into English. Oxford, 1935.
- (h) Chanda, Ramaprasad: Medieval Indian Sculpture in the British Museum. London, 1936.

- (i) Prasad, Ganesh: A treatise on spherical Harmonics and the functions of Bessel and Lamé. Part I (Elementary). Benares, 1930.
- (j) Prasad, Ganesh: A treatise on spherical Harmonics and the functions of Bessel and Lamé. Part II (Advanced). Benares, 1932.
- (k) Tucci, Giuseppe: Indo-Tibetica II. Rin C'en bzañ po c la rinascita del Buddhismo nel Tibet intorno al mille. Roma, 1933.
- (l) Tucci, Giuseppe: Indo-Tibetica III. I Templi del Tibet occidentale e il loro simbolismo artistico. Part I. Spiti e Kunavar. Roma, 1935.
- (m) Tucci, G. and Ghersi, E.: Cronaca della missione scientifico Tucci nel Tibet occidentale (1933). Roma, 1934.

(4) *Manuscript Drawings of Indian Fish and other animals recently acquired by the Asiatic Society of Bengal.*

These drawings, 146 of fish and 53 of other animals, have been acquired by the Society at the suggestion of Dr. S. L. Hora.

At the top of each drawing is written in pencil the scientific or the vernacular Indian name. In addition there are notes written in an old system of shorthand.

The paper of most of the drawings has a water-mark dated 1794, while some sheets are dated 1798. This shows that the drawings were made towards the end of the eighteenth century.

Now that the drawings are available in India, their history will be worked out in detail and the results presented to the members of the Society in due course. The greatest importance of these drawings lies in the fact that they add a new chapter to the history of Indian ichthyology. So far Hamilton (once Buchanan) has been regarded as the first person who made a systematic study of the fresh-water fishes of India, but the drawings under report show that someone had an equally keen interest in the study of these fishes before him.

With the new acquisition, the Asiatic Society of Bengal now possesses a unique collection of manuscript drawings of Indian fishes of great historic value.

(5) *Selection from the Arabic and Persian MSS. acquired during 1935.*

- (a) *Tārīkh-i-Ishahān*, Two Volumes.
  - (b) *Tārīkh-i-Ibn-i-Asākir*, Seven Volumes.
  - (c) *Tazkirat-ul-Huffaz*, Four Volumes.
  - (d) *Lisān-ul-Mizān*, Six Volumes.
  - (e) *Tahzīb-ul-Tahzīb*, Twelve Volumes.
  - (f) *Tārīkh-i-Baghdād*, Fourteen Volumes.
  - (g) *Shazarāt-uz-Zuhab*, Eight Volumes.
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## ANNUAL REPORT FOR 1935.

The Council of the Asiatic Society of Bengal has the honour to submit the following report on the state of the Society's affairs during the year ending the 31st December, 1935.

### 1. Ordinary Members.

*Gains and losses.*—These were as follows during the year :—

<i>Gains.</i>		<i>Losses.</i>	
Elections carried forward ..	8	Elections carried over ..	7
New elections ..	29	Applications withdrawn ..	2
		Elections lapsed ..	2
		Deaths ..	10
		Resignations ..	23
		Rule 38 ..	10
Total ..	37	Total ..	54

Initial total 442 ; net loss 17 ; final total 425.

*Rule 38.*—This Rule, dealing with members whose subscriptions are in arrears, was strictly applied and the names of 10 Members were subsequently removed from the roll for this cause.

*Membership List.*—The customary detailed cross-check of the membership lists with the membership card index was made at the end of the year.

*Non-resident Members.*—Their total at the end of the year was 107, leaving more than ever room for substantial expansion.

*Life-members.*—The total of our Life-members has decreased by one and now stands at 56. One was lost by death ; and no Members compounded during the year.

*Deaths.*—This year the loss to the Society by death has been heavy. Amongst the distinguished and especially valued members lost to us, whose memory will be cherished, and for whose departure the Society is the poorer, the following may be mentioned :—

Dr. P. J. Bruhl (Life-member, 1909 and Ordinary Fellow, 1912).

Khan Bahadur Abdul Gaffar (Ordinary Member, 1926).

A. G. Lunan (Ordinary Member, 1929).

Dr. Jatindranath Maitra (Ordinary Member, 1918).

F. Williamson (Ordinary Member, 1934).

Dr. Ganesh Prasad (Ordinary Member, 1935).

Dr. Narendranath Basu (Ordinary Member, 1928).

### 2. Associate Members.

During 1935 one Associate Member was lost by death :—

Rev. Father H. Hosten, S.J. (1910).

No new Associate Member was elected during the year. The present number stands at 5 ; statutory maximum 15.

### **3. Special Anniversary Honorary Members.**

During the year the Society received to its great regret news of the death of one of the 12 Special Anniversary Honorary Members elected last year at the occasion of its 150th Anniversary :—

Dr. Henry Fairfield Osborn (1934).

### **4. Institutional Members.**

During the year no new institution was admitted to this class of membership.

Their total number remains the same, namely 7.

### **5. Ordinary Fellows.**

On the date prescribed by the regulations for the issue of nomination papers for the election of new Fellows there were no vacancies and consequently no election took place at the Annual Meeting held on the 4th February, 1935.

We lost through death the following two Ordinary Fellows :—

Lt.-Col. H. W. Acton (1930).

Dr. P. J. Bruhl (1912).

The following Ordinary Fellow resigned his membership in the Society :—

Sir C. V. Raman (1925).

At the end of 1935 the number of Ordinary Fellows was 44 ; statutory maximum 50.

### **6. Honorary Fellows.**

During the year no scholars were newly elected Honorary Fellows, and the following two distinguished Honorary Fellows were lost by death :—

Dr. Herbert Allen Giles (1917).

Dr. Sylvain Lévi (1920).

Their number at the end of the year was 24 ; statutory maximum 30.

### **7. Obituary.**

During the year the Society received to its great regret news of the death of the following distinguished relations :—

Sir John Thompson (An Ordinary Member, from 1909 to 1933).

Sir D. P. Sarvadhikary (An Ordinary Member, from 1924 to 1935).

Dr. G. N. Mukhopadhyaya (An Ordinary Member, from 1908 to 1931, and Fellow, from 1923 to 1931).

### 8. Condolences.

The Council expressed its condolences at the occasion of the death of the following distinguished personality deceased during the year :—

M. L. Finot, First Director of the French School of the Far East.

### 9. Council.

The Council met 13 times during the year. The attendance averaged 9 of the 19 component members.

The following resolutions of thanks were passed by the Council :—

To the Outgoing Members of Council for their services rendered to the Society and for their valued support given to the Council and a special vote of thanks to Sir Rajendra Nath Mookerjee.

To Baron Ow-Wachendorf for presenting to the Society the Official German Record of International Policies of the Great European Powers from 1871 to 1914, in 54 volumes.

To Sir B. L. Mitter for presenting to the Society a portrait of the late Mr. Pramatha Nath Bose.

To Sir B. L. Mitter for a donation for the institution of a medal in memory of the late Mr. Pramatha Nath Bose.

### 10. Office Bearers.

The changes in the Council during the year were as follows :—

Mr. Johan van Manen, Acting Honorary Treasurer, *vice* Dr. S. L. Hora, absent, from 12-3-35 to 29-3-35, and from 25-9-35 to 15-10-35.

Absences other than those mentioned above were :—

Sir Lewis Formor, absent from 15-1-35 to 1-2-35 ; from 18-4-35 to 5-8-35 ; and from 17-9-35 to 1-11-35.

Dr. A. M. Heron, absent from 1-1-35 to 1-4-35 ; from 15-5-35 to 15-6-35 ; and from 25-9-35 to 18-10-35.

Mr. L. R. Fawcus, absent from 1-1-35 to 15-4-35 ; from 1-11-35 to 31-12-35.

Mr. Percy Brown, absent from 1-4-35 to 1-7-35.

Lt.-Col. R. N. Chopra, absent from 18-4-35 to 17-7-35.

Sir B. L. Mitter, absent from 11-4-35 to 25-6-35 ; and from 1-9-35 to 1-11-35.

Dr. S. K. Chatterji, absent from 1-5-35 to 1-9-35.

Dr. J. N. Mukherjee, absent from 31-5-35 to 30-9-35.

Sir U. N. Brahmachari, absent from 3-6-35 to 10-7-35.

Mr. C. C. Calder, absent from 1-6-35 to 1-12-35.

R.B. R. Chanda, absent from 5-8-35 to 9-9-35.

Justice Lort-Williams, absent from 15-7-35 to 5-11-35.

### 11. Committees of Council.

The standing Committees of Council during the year, namely, the Finance, Publication, and Library Committees, met monthly.

The following special sub-committees were appointed during the year :—

Sub-committee to review the general question of the creation of a new form of Associate Membership.

Sub-committee to draft a letter to be considered in circulation, with reference to the proposed cessation of excavations at Mahenjo Daro.

## 12. Finance Committee.

The Finance Committee continued during the year to meet on dates different from, and a few days prior to, those of the Council Meetings.

A Special Meeting to frame the budget for the next year was held in December.

## 13. Office.

*Staff.*—Mr. N. M. Ramachandran, File Clerk, left towards the end of the month of June and Mr. N. Norman was placed in charge of the filing.

*Subordinate Staff.*—In the subordinate staff the usual minor changes took place, which do not call for comment.

*Correspondence.*—This year the number of outgoing letters was 1,539 and that of incoming letters 2,601.

*Files.*—During the year intermittent work was continued with regard to our files, old and new, but not much real progress can be reported.

*Stock-room.*—Labelling, bundling, and registration of the contents of the stock-room were kept up-to-date during the year for new publications. The stock-books for new accessions and for sales were kept up.

*Distribution.*—No change was made in the mode of distribution of our periodicals and notices. A better system for the distribution of the free copies of new issues in the *Bibliotheca Indica* should be devised.

*Address.*—Printed address labels remained in use and the system of constant revision and addition which has been adopted enables us to keep the printed addresses up-to-date, month by month.

*Card Register.*—The card registers of the Society's membership and of that of the Indian Science Congress were kept up-to-date and checked at the close of the year.

*Circulars and Forms.*—The number of these printed during the year was 57. About Rs. 694 were expended under this head.

*Office Furniture.*—One office table and four wall-shelves for the library were acquired, as also two steel skeleton racks for files and current papers.

*Office Manual.*—This still remains a desideratum.

*Arrangement.*—No change was made in the present disposition of the rooms except that a room on the ground floor was vacated and placed at the disposal of the National Institute of Sciences of India for its office.

#### 14. Rules and Regulations.

During the year no changes were made in the Rules of the Society except that some minor changes were adopted in the Regulations of all the memorial awards. The Council framed Regulations for the award of the Pramatha Nath Bose Memorial Medal.

#### 15. Indian Science Congress.

*Twenty-second Session.*—The Twenty-second Annual Meeting of the Indian Science Congress, inaugurating its fourth circuit, was held (for the fourth time) in Calcutta, from January 2nd to January 8th, 1935, under the joint patronage of His Excellency the Right Honourable Earl of Willingdon, G.M.S.I., G.C.M.G., G.B.E., Viceroy and Governor-General of India, and His Excellency the Right Honourable Sir John Anderson, P.C., G.C.B., G.C.I.E., Governor of Bengal.

*President.*—Dr. J. H. Hutton, C.I.E., M.A., D.Sc., F.A.S.B., I.C.S., Deputy Commissioner, Kohima, Naga Hills, was President of the Congress.

*Proceedings.*—The Proceedings of the Congress were published during the second week of December. The publication contained 632 pages which was 88 pages of letterpress more than the year before. The number of abstracts sent in for reading to the Congress numbered this year 776 as against 626 last year.

*Administration.*—During the latter months of the year the usual administrative work for the Congress in connection with the next session (Twenty-third Congress), to be held in Indore, was performed by the Society's office, which also attended to the general administration of the Congress when this was not in session. This year the burden of work thrown on the Society's office was as heavy as usual.

*Programme and Abstracts.*—As in the previous years the programme of the meeting and the abstracts were sent, as far as was practicable, by post to all Members who had applied for membership before the date of their publication. This year this date was 5th December, two weeks earlier than last year.

*Finance.*—The Congress finances remained separate from those of the Society.

*Secretaries.*—The General Secretaries to the Congress were Dr. J. N. Mukherjee and Mr. W. D. West; and the Managing Secretary was Mr. Johan van Manen in his quality as General Secretary of the Asiatic Society of Bengal.

### **16. Indian Museum.**

The Society's representative on the Board of Trustees of the Indian Museum, under the Indian Museum Act, X of 1910, continued to be Rai Sir Upendra Nath Brahmachari Bahadur, Kt., who was reappointed as such for a further period of three years.

### **17. Kamala Lectureship.**

The Society's nominee to serve on the Election Committee of the Kamala Lectureship, administered by the Calcutta University, remained the same, Rai Sir Upendra Nath Brahmachari Bahadur, Kt.

### **18. National Institute of Sciences of India.**

The Society's representatives to serve on the Council of the National Institute of Sciences of India are Lt.-Col. R. N. Chopra and Mr. C. C. Calder.

### **19. Deputations.**

The Society received invitation to send representative to various functions of the undermentioned body :—

19th International Congress of Orientalists at Rome.

The Council invited Dr. S. K. Chatterji to represent the Society.

### **20. Honours.**

Amongst the Honours conferred during the year several were bestowed on members of the Society. The Society's President (Dr. L. L. Fermor), The Hon'ble Mr. Justice M. N. Mukherjee, Maharaja P. C. Bhanj Deo of Mayurbhanj, Mr. A. H. Ghuznavi, and Mr. W. M. Craddock received the honour of Knighthood, whilst Lt.-Col. R. Knowles was made a C.I.E

### **21. Congratulations.**

Congratulations were sent to several of the above recipients of Civic Honours.

### **22. Visits.**

An appreciable number of distinguished visitors came to the Society during the year. Amongst them were scholars from China, England, Switzerland, and Germany.

Members of the Inter-University Board visited the Society in February.

### **23. Social Functions.**

No social functions were held by the Society during the year.

The President generously enabled the Society to maintain the traditional practice of providing, before the Ordinary Monthly Meetings, light refreshments to the Members and visitors present.

### **24. Elliott Prize for Scientific Research.**

The annual prizes for 1933 and 1934 for research in Chemistry and Physics, respectively, were, in the Annual Meeting of 1935, awarded to Prof. Nirmal Kumar Sen and Dr. D. P. Roy Chowdhury, respectively.

The prize offered for the year 1935 was for Geology and Biology (including Pathology and Physiology). The announcement regarding the prize will be made in the Annual Meeting of 1936.

The prize for next year, 1936, will be for research in Mathematics.

### **25. Barclay Memorial Medal.**

The (biennial) award of the Barclay Memorial Medal for conspicuous contributions to Medical and Biological Science with reference to India, for 1935, will be announced in the Annual Meeting of 1936.

The next award will be announced in the Annual Meeting in February, 1938.

### **26. Sir William Jones Memorial Medal.**

The (biennial) award of the Sir William Jones Memorial Medal for conspicuous researches in Science was announced in the Annual Meeting of 1935. The medal was bestowed on Rai Sir Upendra Nath Brahmachari Bahadur, Kt.

During the year the Council accepted Sir U. N. Brahmachari's suggestion and changed the period of the award into a triennial one. The next (triennial) award will be announced in the Annual Meeting of 1938.

### **27. Annandale Memorial Medal.**

The next (triennial) award, for important contributions to the study of Anthropology in Asia, will be announced in the Annual Meeting of 1937.

### **28. Joy Gobind Law Memorial Medal.**

The next (triennial) award of the Joy Gobind Law Memorial Medal for 1935, for conspicuously important work on Zoology in Asia, will be announced in the Annual Meeting of 1936.

### **29. Paul Johannes Brühl Memorial Medal.**

The (triennial) award of the Paul Johannes Brühl Memorial Medal for important contributions to the study of Asiatic Botany was announced in the Annual Meeting of 1935. The medal was bestowed on Mr. I. H. Burkill.

The next (triennial) award will be announced in the Annual Meeting of 1938.

### **30. Calcutta Indian Science Congress Prize.**

The first award of the prize was announced in the Annual Meeting of 1935 and the award was made to Dr. Meghnad Saha with special reference to his work for the Indian Science Congress.

The next award will be made in connection with the next session of the Congress to be held in Calcutta.

### **31. Pramatha Nath Bose Memorial Medal.**

During the year Sir B. L. Mitter, on behalf of the 'Pramatha Nath Bose Memorial Committee', donated a sum of Rs. 1,800 invested in 3½% Government Paper for the institution of a Pramatha Nath Bose Memorial Medal for conspicuously important contributions to practical or theoretical geology with special reference to Asia, to commemorate the life-work of Mr. Bose, who was a member of the Society for 32 years and a pioneer of geological science and practice in India.

It was decided to gratefully accept the donation. The award is to be triennial. Regulations for the award have been framed and passed by Council.

### **32. Society's Premises and Property.**

A sum of Rs. 2,000 was set aside during the year to be credited to the Building Repairs Fund.

During the year some petty repairs to the Society's building were effected. It is contemplated to undertake thorough repairs during the present year.

The various desiderata and problems existing under the heading Premises and Property have been mentioned in the



Annual Reports of the last few years and have to be kept in mind until realization.

### 33. Accommodation.

Old problems to be carried over as still needing attention are : the provision of a set of small work-rooms for various uses, and the shelving of the stock-rooms.

During the year a room on the ground floor was vacated and placed at the disposal of the National Institute of Sciences of India for its office.

The available shelving in the Islamic MSS. and printed works room has been completely filled and needs extension. The space available for extension is limited.

### 34. Artistic and Historical Possessions.

Sir B. L. Mitter presented to the Society a portrait of late Mr. Pramatha Nath Bose. This striking work of art has been gratefully accepted by the Society and has been hung in the Society's main hall.

### 35. Presentations, Donations, and Legacies.

Except for the presentations to be mentioned under the next heading the Society received a donation from Sir B. L. Mitter for the institution of a medal in memory of the late Mr. Pramatha Nath Bose.

### 36. Library.

*Permanent Library Endowment Fund.*—The fund received no further donations during the year. The accumulated interests permitted the purchase of one further paper of Rs. 1,000 (face value,  $3\frac{1}{2}$  per cent.) during the year. The total invested capital (face value) increased thereby to Rs. 14,000 and has to accumulate to a total of Rs. 30,000 before income will be available for expenditure.

*Accessions.*—The accessions to the library during the year, exclusive of about 200 periodicals received through exchange or otherwise, numbered 212 volumes, out of which 71 were purchased and 141 were acquired by presentation.

*Binding.*—During the year 498 units, including books, pamphlets, and periodicals, were bound at a cost of Rs. 625, out of a total budget allowance of Rs. 650 sanctioned for the purpose.

*Purchases.*—The allocation for the purchase of books for the year was Rs. 2,000, but actually an amount of Rs. 1,924

was spent. A special grant of Rs. 500 was made for the purchase of early Manuscript Drawings of Indian Fish and other animals. For the new year the grant has been fixed at Rs. 2,500.

*Shelving.*—A new block of wall-shelves was installed during the year to keep the most important works of reference more easily accessible. Installation of special steel shelving for manuscripts and books in the western section remains to be effected, and provision has also to be made for further steel shelving for the current accessions of periodical literature. Our available shelving space for printed books is also rapidly coming to an end.

*Presentations.*—The Consul General for Germany very graciously presented the Society with a set of *Die Grosse Politik der Europäischen Kabinette, 1871–1914, Herausgegeben von J. Lepsius, A. M. Bartholdy, F. Thimme, 54 Volumes.* These volumes now form a part of our library.

### 37. Finance.

(1) Appendix III contains the usual statements showing our accounts for 1935. No change has been made in the form of their presentation since the previous year.

(2) Two new statements occur in this year :—

- (1) Pramatha Nath Bose Memorial Fund Account, and
- (2) Fixed Deposit Account, Imperial Bank of India, Calcutta.

(3) One statement, still carried over for final adjustment, is :—

Statement No. 17. International Catalogue of Scientific Literature, London.

(4) The other statements are presented as in the previous year.

(5) The fund accounts again show their invested assets written down to the market values as at the end of the year, and Investment Account No. 25 shows the allocation of invested paper to each fund specifically, whilst both market and face values of the investments are shown in it.

(6) Statement No. 27 shows the Balance Sheet of the Society and the different funds administered by and through it.

(7) The funds belonging to, or administered by, the Society may be classified as follows :—

(a) General Fund.

- (i) Permanent Reserve.
- (ii) Working Balance.

- (b) Specific Funds belonging to the Society.
- (c) Funds administered by the Society.

At the end of the year, the position of these funds, as compared with their position at the end of 1934, was as follows :—

	Face Value.	Market Value.	Face Value.	Market Value.
	31st Dec., 1934.	31st Dec., 1934.	31st Dec., 1935.	31st Dec., 1935.
	Rs.	Rs.	Rs.	Rs.
1. General Fund ..	2,98,100	2,93,300	2,88,600	2,75,400
(a) Permanent Reserve	2,51,100	2,46,700	2,52,000	2,40,900
(b) Working Balance ..	48,100	46,600	36,600	34,500
2. Specific Funds belonging to the Society ..	46,600	45,400	59,000	58,500
3. Funds administered by the Society ..	29,500	28,800	39,500	38,500
	<u>3,73,200</u>	<u>3,67,500</u>	<u>3,87,100</u>	<u>3,72,400</u>

(8) During the year Rs. 864 were received through admission fees. As no ordinary member compounded as a life member and no Institutional Member joined during the year, the above amount as well as a sum of Rs. 61-11 cash balance which was brought forward from 1934, under this head aggregating to Rs. 925-11 was transferred to the Permanent Reserve in the usual manner by conversion at the market rates as on 31st December, 1935, of Government 3½% Paper to the Face Value of Rs. 1,000 belonging to the Temporary Reserve of the working balance, whilst a cash advance of Rs. 30-9 is being carried over to the ensuing year, for adjustment under this head.

(9) The Government of Bengal maintained the 20 per cent. cut in all grants made by them to the Society during the year.

The Society received the following grants from the above Government :—

For	Rs.	Statement.
Journals .. ..	1,600	1
O.P. Fund No. 1 .. ..	7,200	2
Sanskrit MSS. Fund .. ..	2,800	4
Do. .. ..	2,560	4
	<u>14,160</u>	

(10) The Government of Bengal annual grant of Rs. 3,000 in aid of the publication of the Arabic and Persian works of historical interest expired during the year. Government sanction is awaited for the renewal of the grant and it is hoped that same will be received and realized early in the new year.

(11) The income derived from advertising during the year amounted to Rs. 9,600.

(12) The temporary investments of funds in Fixed Deposit and Savings Bank are shown in Statement Nos. 22, 23, and 24.

(13) Statement No. 20 gives an account of the amounts due to and by the Society for membership subscriptions, sales of publications, and contingent charges.

(14) The Government Securities shown in Statement No. 25 are held in safe custody by the Imperial Bank, Park Street Branch. During the year, there was a slight depreciation of the Securities amounting to Rs. 4,074 affecting to that extent the book assets of the Society.

To simplify the accounts, the various investment units in the smaller Fund Accounts were converted into units of one and the same Government loan of the same denomination and amalgamated into single papers for each Fund.

(15) Municipal assessment. For the fourth time in succession the Corporation has enhanced the Assessment on the Society's premises. This time the increase has been so great as to cause serious apprehension. The matter has been placed in the hands of a professional firm of Income Tax Agents to protect the interests of the Society.

(16) The budget estimates for 1935 and the actuals for the year were as follows :—

Estimates.			Receipts.	Expenditure.
			Rs.	Rs.
Ordinary ..	..	..	53,700	53,700
Extraordinary ..	..	..	1,000	1,000
			<hr/>	<hr/>
	TOTAL	..	54,700	54,700
			<hr/>	<hr/>
Actuals.				
Ordinary ..	..	..	56,011	53,529
Extraordinary ..	..	..	864	864
			<hr/>	<hr/>
	TOTAL	..	56,875	54,393
			<hr/>	<hr/>

The ordinary income was about Rs. 2,311 more than estimated.

On the expenditure side also about Rs. 171 was expended less than the estimate.

(17) The year's working shows a decrease in the net balance to the extent of Rs. 1,313 as compared to that of last year, taking into account the depreciation of our investments which amounted to Rs. 4,074.

(18) The budget estimates for probable expenditure have as usual been framed to meet demands under various heads based on vigorous activity in all departments of the Society's work.

The receipts have been conservatively estimated.

## BUDGET ESTIMATES FOR 1936.

## Ordinary Receipts.

	1935 Estimate.	1935 Actuals.	Budget Estimates for 1936.
	Rs.	Rs.	Rs.
Interest on Investments and Deposits {	10,000	10,013	10,000
	800	1,100	700
Advertising .. .. .	9,600	9,600	9,600
Annual Grant .. .. .	1,600	1,600	1,600
Donation .. .. .	..	150	..
Miscellaneous .. .. .	300	374	300
Members' Subscriptions .. .. .	9,500	10,414	10,000
Publications, Sales, and Subscriptions	5,000	5,480	5,000
Proportionate Share of Funds ..	7,000	7,000	7,000
Indian Science Congress Contribution	600	1,000	1,000
Rent .. .. .	9,300	9,300	9,300
	<hr/>	<hr/>	<hr/>
TOTAL ..	53,700	56,011	54,500
	<hr/>	<hr/>	<hr/>

## Ordinary Expenditure.

	Rs.	Rs.	Rs.
Salaries and Allowances .. .. .	30,000	31,856	31,500
Commission .. .. .	300	309	350
Stationery .. .. .	500	389	500
Fan, Light, and Telephone ..	800	768	800
Taxes .. .. .	2,250	2,244	2,250
Postage .. .. .	1,400	1,349	1,500
Freight .. .. .	100	..	..
Contingencies .. .. .	900	720	800
Petty Repairs .. .. .	100	72	100
Insurance .. .. .	500	500	500
Menials' Clothing .. .. .	100	97	200
Office Furniture .. .. .	450	447	450
Building Repairs .. .. .	2,000	2,000	2,000
Provident Fund Share .. .. .	700	686	700
Audit Fee .. .. .	250	250	250
Books, Library .. .. .	2,000	1,924	2,500
" (Special Grant) .. .. .	..	482	..
Binding, Library .. .. .	650	624	600
Journal and Memoirs .. .. .	9,900	7,868	6,000
Printing, Circular .. .. .	800	694	800
Donations .. .. .	..	200	..
Gratuity .. .. .	..	50	..
Permanent Reserve .. .. .	..	..	1,500
Replacement of Fans .. .. .	..	..	1,200
	<hr/>	<hr/>	<hr/>
TOTAL ..	53,700	53,529	54,500

**Extraordinary Receipts.**

	1935 Estimate.	1935 Actuals.	Budget Estimates for 1936.
By Fees	Rs.	Rs.	Rs.
by Admission Fees .. ..	650	864	650
by Compounding Fees .. ..	300	..	300
by Institutional Membership Registration Fees .. ..	50	..	50
TOTAL ..	1,000	864	1,000

**Extraordinary Expenditure.**

To Permanent Reserve	Rs.	Rs.	Rs.
by Admission Fees .. ..	650	864	650
by Compounding Fees .. ..	300	..	300
by Institutional Membership Registration Fees .. ..	50	..	50
TOTAL ..	1,000	864	1,000

**38. Publications.**

*Journal*.—Of the *Journal and Proceedings*, Volume XXX, for 1934, one number consisting of 108 pages and 34 plates was issued to close the volume. The title-pages and index for this volume were also published.

Of the *Journal*, Volume I, for 1935, four numbers consisting of 468 pages and 8 plates were issued.

In all 576 pages and 42 plates were published during the year.

*Title of Journal*.—During the year it was decided to begin a Third Series of the *Journal*. The *Journal* is henceforth to be published in three parts: *Journal*, *Letters*; *Journal*, *Science*; and *Year-Book*. The *Year-Book* will contain the material hitherto published in the *Proceedings* but in an expanded form. For those who wish to bind the parts separately title-pages for the separate parts will be provided. There will also be title-pages for the complete volume of the three parts together.

*Memoirs*.—Of the *Memoirs* two numbers were published, aggregating 116 pages and 7 plates.

These two numbers constitute the seventh and eighth parts of Col. Sewell's series on Geographic and Oceanographic Research in Indian Waters.

*Indian Science Congress*.—The *Proceedings* of the 22nd Indian Science Congress, consisting of 632 pages and one table, were published during the year.

*Sales.*—A sum of Rs. 5,410 was realized, being Rs. 410 above the budget estimate.

*Expenditure.*—The expenditure on *Journal* and *Memoirs* was about Rs. 7,868.

*Advance Proceedings.*—Seven numbers were published during the year.

*Year-Book.*—The *Year-Book* for 1934 was completed in print and will be issued early in the present year.

### 39. The Baptist Mission Press.

Under the capable superintendence of Mr. P. Knight the Baptist Mission Press continued to act as our chief printers and again gave invaluable assistance and maintained closest co-operation.

### 40. Agencies.

Our European and Indian Agents remained the same throughout the year. An extension of the list for Asiatic countries is desirable.

### 41. Exchange of Publications.

During the year, the following applications for exchange with the Society's publications were considered by the Council, with the decisions as noted against them :—

<i>Publications of :</i>	<i>To be exchanged with :</i>
Lingnan University, Canton, China .. ..	<i>Journal.</i>
Book for Exchange Dept., U.S.S.R. Society for cultural relations with foreign countries, Moscow.	<i>Journal.</i>
Institut für Völkerkunde der Universität, Wien ..	<i>Journal.</i>
Government Epigraphist for India .. ..	<i>Journal (Letters).</i>
Sinensia, China .. ..	<i>Journal.</i>
Sze Chuan Research Society .. ..	<i>Journal.</i>

### 42. Meetings.

The Ordinary Monthly Meetings of the Society were held regularly every month, with the exception of January and May and the recess month of October. The recorded average attendance was 19 members and 4 visitors. The maximum attendance was in August with 25 members and 11 visitors.

Two meetings of the Medical Section were held during the year.

### 43. Exhibits.

In the Ordinary Monthly Meetings a number of exhibits were shown and commented upon by the exhibitors. The following may be mentioned :—

- S. L. Hora : An interesting Implement for Mud-fishing from Uttarbhag, Lower Bengal.
- Sir L. L. Fermor : Tubular Panjal Trap from Kashmir, and an Iron Horse from the Central Provinces.
- Baini Prashad : Ethnographical Specimens from the Naga Hills.
- V. P. Sondhi : A Coffin and a Skull from a lime-stone cave in the Southern Shan States, Burma.
- R. Chanda : A photograph of the tomb of 'Hindoo' Stuart (died in Calcutta, in 1828) in the South Park Street Cemetery, and photographs of four sculptures originally belonging to his collection and now exhibited in the British Museum.
- Percy Brown : Portrait of a Lady of the Elizabethan Period, and a miniature painting of a Mughal Prince.
- A. L. Coulson : The Perpeti meteorite ; additional stones from the Perpeti meteorite shower ; the Patwar meteorite.
- A. M. Heron : An artificial natural Freak from China.
- J. van Manen : A Babylonian clay Tablet with cuneiform inscriptions ; and some Tibetan Tankas.
- W. D. West : Cinematograph film of Quetta after the earthquake.

#### 44. Communications.

Apart from papers submitted both for reading and subsequent publication, a number of communications, not intended for subsequent publication, were made from time to time in the Ordinary Monthly Meetings.

Amongst such communications made during the year the following may be mentioned :—

Johan van Manen : Recent Advances in the study of Chinese Philosophy ; the word *ch'ang* in the Tao Te king.

#### 45. General Lectures.

During the year no General Lectures were given.

#### 46. Philology.

Four papers were read during the year to be published later.

Three papers read in the previous years were published during the year.

One paper was read and also published during the year.

#### 47. Natural History : Biology.

One paper read in the previous year was published during the year.

One new paper was read and published during the year.

One paper was read during the year to be published later.

#### 48. Natural History : Physical Science.

One paper read in the previous year was published during the year.



### 49. Anthropology.

One paper read in the previous year was published during the year.

Six papers were read during the year to be published later.

### 50. Medical Section.

During the year two meetings of the Medical Section were held, as detailed below :—

November. Speaker : S. L. Hora.

Subject : Recent Indian cases of live Fishes impacted in the food and air passages of men.

Speaker : B. G. Mallaya.

Subject : Surgical aspect of live Fishes impacted in the human food and air passages.

December. Speakers : Lt.-Col. R. N. Chopra and A. C. Roy.

Subject : Some biochemical characteristics of snake venom.

The recorded attendance averaged 6 members and 8 visitors.

### 51. Bibliotheca Indica.

*Works published.*—Actually published were four issues, Nos. 1520, 1521, 1523, and 1525, of an aggregate bulk of 11 fascicle units of 96 or 100 pages. The details are given in Appendix II to this report.

Of the above issues one constituted a complete work, namely :—

1. Maitri Upanisad, text and translation (Second and revised edition).

A separate reprint of the translation alone was also issued.

*Indian works continued.*—The following works were continued during the year :—

1. Manusmṛti, with the commentary of Medhatithi, Sanskrit.
2. Vaikhānasaśrautasūtram, text, Sanskrit
3. Saundarānandakāvyaṃ, text, Sanskrit (Second and revised edition).
4. Ātmatattvaviveka, text, Sanskrit.

*Islamic works continued.*—In the Islamic Series work was continued on two works, namely :—

1. 'Amal-i-Ṣālih, Persian.
2. Rubā'iyāt of Umar-i-Khayyām, Persian.

### 52. Catalogue of Sanskrit Manuscripts.

Work on Volume VIII, on Tantra, advanced well. By the end of the year 240 pages were printed off, about 80 pages were in type, and a large instalment of the copy was made press-ready.

**53. Arabic and Persian Manuscripts, Search and Catalogue.**

The work in this department was steadily pursued.

*Binding.*—The binding and repairing of previously and newly acquired MSS. was continued and 50 MS. volumes were bound during the year, making a total of 1,108 MSS. bound and repaired since the end of 1924.

*Acquisitions.*—During the year twenty-nine manuscripts were acquired by purchase. A total amount of Rs. 167 was spent on these new acquisitions.

*Reference books.*—The collection of Persian and Arabic MSS. catalogues was again added to and its completion continues an object of attention. A number of biographical works of reference were also purchased during the year.

*Catalogue.*—The work on the Arabic Catalogue was very satisfactory and up to 432 pages were print-ordered during the year.

**54. Numismatics.**

One Numismatic Supplement (for 1934) was published during the year, aggregating 108 printed pages and 34 plates.

**55. Royal Title.**

Giving effect to a decision arrived at the year before, a formal application was made through H.E. the Viceroy for the privilege of being permitted to prefix the title 'Royal' before the Society's name.

## [APPENDIX I.]

## Membership Statistics.

(As calculated for December 31st, for 30 years.)

YEAR.	ORDINARY.								EXTRA-ORDINARY.					FELLOWS		
	PAYING.				NON-PAYING.				Total Ordinary Members.					Grand Total Membership.		
	Resident.	Non-Resident.	Foreign.	Total.	Absent.	Life.	Total.	Centenary Honorary.		Associate.	Institutional.	Anniversary Honorary.	Total.		Honorary.	Ordinary.
1906 ..	173	147	15	335	52	20	72	407	4	12	..	..	16	423	30	..
1907 ..	174	175	20	369	31	20	51	420	4	12	..	..	16	436	28	..
1908 ..	181	193	17	391	38	19	57	448	4	13	..	..	17	465	30	..
1909 ..	183	217	13	413	40	20	60	473	4	14	..	..	18	491	28	..
1910 ..	209	217	16	442	43	23	66	508	4	14	..	..	18	526	27	17
1911 ..	200	225	19	444	53	22	75	519	3	14	..	..	17	536	28	19
1912 ..	203	229	19	451	43	23	66	517	3	13	..	..	16	533	27	24
1913 ..	200	211	19	430	46	23	69	499	3	14	..	..	17	516	27	28
1914 ..	191	187	19	397	50	26	76	473	3	14	..	..	17	490	24	27
1915 ..	171	188	21	380	40	25	65	445	3	15	..	..	18	463	29	31
1916 ..	145	159	18	322	60	25	85	407	3	15	..	..	18	425	26	33
1917 ..	150	144	15	309	45	24	69	378	2	12	..	..	14	392	22	35
1918 ..	153	145	17	315	43	24	67	382	2	10	..	..	12	394	22	39
1919 ..	141	128	15	284	64	25	89	373	2	11	..	..	13	386	18	36
1920 ..	161	134	15	310	32	26	58	368	2	11	..	..	13	381	28	38
1921 ..	160	132	16	308	26	26	51	359	2	12	..	..	14	373	28	40
1922 ..	160	141	16	317	26	26	52	369	2	13	..	..	15	384	30	39
1923 ..	147	120	13	280	30	27	57	337	2	11	..	..	13	350	28	37
1924 ..	209	134	12	355	29	28	57	412	2	12	..	..	14	426	27	37
1925 ..	263	137	12	412	23	27	50	462	2	12	..	..	14	476	26	34
1926 ..	319	162	20	501	23	28	51	552	2	12	..	..	14	566	25	34
1927 ..	328	167	18	513	28	33	61	574	2	13	..	..	15	589	28	38
1928 ..	344	167	23	534	42	46	88	622	1	12	..	..	13	635	28	40
1929 ..	331	181	21	533	36	49	85	618	1	10	2	..	13	631	27	43
1930 ..	291	194	37	522	22	52	74	596	1	8	2	..	11	607	29	47
1931 ..	228	184	29	441	26	52	78	519	1	8	5	..	14	533	29	46
1932 ..	222	126	23	371	27	54	81	452	1	7	5	..	13	465	28	45
1933 ..	194	126	27	347	33	56	89	436	..	7	6	..	13	449	26	49
1934 ..	217	112	30	359	26	57	83	442	..	6	7	12	25	467	26	47
1935 ..	206	107	28	341	28	56	84	425	..	5	7	11	23	448	24	44

## [APPENDIX II.]

**List of Publications issued by the Asiatic Society of Bengal during 1935.****(a) Bibliotheca Indica :**

	Price
	Rs. A. P.
(1) Maitrī Upanisad, English translation (1 unit) ..	1 0 0
(2) Maitrī Upanisad, text and translation. Fasc. 3 (2 units) ..	2 0 0
(3) Ṭabaqāt-i-Akbarī, Persian text. Vol. 3 : complete (6 units) ..	6 0 0
(4) Kaṣṣf Al-Ḥujub wal Astār 'An Asmā' Al-Kutub wal Asfār, text (2 units) ..	2 0 0

**(b) Journal and Proceedings (New Series) :**

Vol. XXX : No. 3 (39 units) ..	14 10 0
Vol. I (Letters) : No. 1 (12 units) ..	4 8 0
Vol. I (Letters) : No. 2 (18 „ ) ..	6 12 0
Vol. I (Science) : No. 1 ( 6 „ ) ..	2 4 0
Vol. I (Science) : No. 2 ( 2 „ ) ..	0 12 0

Title-pages and Index for Vol. XXX. (Free to Members and Subscribers on application.)

**(c) Advance Proceedings :**

Vol. II : Nos. 1-7. (Free to Members.)

**(d) Memoirs :**

Vol. IX : No. 7 ( 5 units) ..	2 13 0
Vol. IX : No. 8 (10 „ ) ..	5 10 0

**(e) Miscellaneous :**

Proceedings, Twenty-second Indian Science Congress 15 0 0



Abstract Statement  
of  
Receipts and Disbursements  
of the  
Asiatic Society of Bengal  
for  
the Year 1935

## STATEMENT No. 1.

1935.

General

## Income and Expenditure Account

		Rs.	As.	P.	Rs.	As.	P.
<b>TO ESTABLISHMENT.</b>							
Salaries and Allowances	..	31,906	12	6			
Commission	..	308	10	9			
					32,215	7	3
<b>GENERAL EXPENDITURE.</b>							
Stationery	..	388	15	0			
Fans and Light	..	462	15	0			
Telephone	..	305	5	2			
Taxes	..	2,244	7	0			
Postage	..	1,349	5	0			
Contingencies	..	766	11	7			
Printing Circulars, etc.	..	693	14	0			
Audit Fee	..	250	0	0			
Petty Repairs	..	72	13	6			
Insurance	..	500	0	0			
Menials' Clothing	..	96	6	0			
Donations	..	200	0	0			
Furniture	..	447	0	0			
					7,777	12	3
<b>LIBRARY AND COLLECTIONS.</b>							
Books	..	2,405	13	10			
Binding	..	624	8	0			
					3,030	5	10
<b>PUBLICATIONS.</b>							
Journal and Proceedings and Memoirs	....				7,867	11	6
<b>CONTRIBUTION TO FUNDS.</b>							
Provident Fund Contribution for 1935	....				685	2	0
					51,576	6	10
<b>TRANSFER TO—</b>							
Building Repair Fund Account	..	....			2,000	0	0
<b>SUNDRY ADJUSTMENTS.</b>							
Depreciation of Investments re-							
valued on 31-12-35	..	....			4,077	2	0
Bad Debts written-off	..	....			943	0	0
BALANCE AS PER BALANCE SHEET	..	....			2,75,327	13	5
					3,33,924	6	3

## STATEMENT No. 1.

*Fund.*

1935.

for the year to 31st December, 1935.

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	Rs.	As.	P.	Rs.	As.	P.
By BALANCE FROM LAST ACCOUNT ..	....			2,76,691	3	0

## CASH RECEIPTS.

Interest on Investments ..	10,013	6	0			
Interest on Fixed Deposits ..	1,099	14	6			
Advertising ..	9,600	0	0			
Miscellaneous ..	374	3	10			
Government grant ..	1,600	0	0			
Rent ..	9,300	0	0			
Contributions from Indian Science Congress ..	1,000	0	0			
Donations ..	150	0	0			
				33,137	8	4

## PERSONAL ACCOUNT.

Members' Subscriptions ..	10,621	0	0			
Admission Fees ..	864	0	0			
Miscellaneous ..	200	10	9			
				11,685	10	9

## TRANSFERS FROM FUNDS.

Proportionate Share in General Expenditure—						
O.P. Fund (1) Account ..	2,500	0	0			
Sanskrit MSS. Fund Account ..	2,000	0	0			
Arabic and Persian MSS. Fund Account ..	2,500	0	0			
				7,000	0	0
Publication Fund Account ..	....			5,410	0	2

3,33,924 6 3



## STATEMENT No. 2.

1935.

*Oriental Publication*

From a monthly grant made by the Government of Bengal for the publi-  
(Rs. 500), and for the publication of Sanskrit  
(Less 20% from the

---

	Rs.	As.	P.	Rs.	As.	P.
To Printing .. .. .	....			3,242	0	0
Proportionate Share in General						
Expenditure .. .. .	....			2,500	0	0
Balance as per Balance Sheet ..	....			1,583	1	11
				<hr/>		
				7,325	1	11

---

## STATEMENT No. 3.

1935.

*Oriental Publication*

From an annual grant made by the Government of Bengal of  
Historical  
(Less 20% from the

---

	Rs.	As.	P.
To Balance from last Account .. .. .	500	6	4
Printing .. .. .	3,222	4	3
	<hr/>		
	3,722	10	7

---

## STATEMENT No. 4.

1935.

*Sanskrit Manuscripts Fund*

From an annual grant of Rs. 3,200 made by the Government of Bengal  
by the Society; and Rs. 3,600 from the  
(Less 20% from the

---

	Rs.	As.	P.	Rs.	As.	P.
To Pension .. .. .	120	0	0			
Cataloguing .. .. .	2,400	0	0			
Printing .. .. .	1,151	0	0			
Purchase of MSS. .. .. .	20	0	0			
	<hr/>			3,691	0	0
Proportionate Share in General						
Expenditure .. .. .	....			2,000	0	0
Balance as per Balance Sheet ..	....			16,443	1	3
				<hr/>		
				22,134	1	3

---

## STATEMENT No. 2.

*Fund, No. 1, in Account with A.S.B.*

1935.

cation of Oriental Works and Works of Instruction in Eastern Languages  
 Works hitherto unpublished (Rs. 250).  
 1st of April, 1932.)

---

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	125 1 11
Annual Grant	..	....	7,200 0 0
			<hr/>
			7,325 1 11

---

## STATEMENT No. 3.

*Fund, No. 2, in Account with A.S.B.*

1935.

Rs. 3,000 for the publication of Arabic and Persian Works of  
 Interest.  
 1st of April, 1932.)

---

			Rs. As. P.
By Balance as per Balance Sheet	..	..	3,722 10 7
			<hr/>
			3,722 10 7

---

## STATEMENT No. 4.

*Account, in Account with A.S.B.*

1935.

for the publication of the Catalogue of Sanskrit Manuscripts acquired  
 same Government for Research Work.  
 1st of April, 1932.)

---

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	16,694 1 3
Annual Grant for Research Work,	..		
1935-36	..	2,880 0 0	
Annual Grant for Cataloguing	..	2,560 0 0	
		<hr/>	5,440 0 0
			<hr/>
			22,134 1 3

---

## STATEMENT No. 5.

1935.

*Arabic and Persian Manuscripts*

From an annual grant of Rs. 5,000 made by the Government of India for  
by the Society ; for the purchase of further Manuscripts,  
Manuscripts found in

	Rs.	As.	P.	Rs.	As.	P.
To Manuscripts Purchase .. ..	433	4	0			
Binding .. ..	134	8	0			
Cataloguing .. ..	2,400	0	0			
	<hr/>			2,967	12	0
Proportionate Share in General Ex- penditure .. ..	....			2,500	0	0
Balance as per Balance Sheet .. ..	....			4,068	13	0
				<hr/>		
				9,536	9	0

## STATEMENT No. 6.

1935.

*Barclay Memorial*

From a sum of Rs. 500 odd given in 1896 by the Surgeon  
encouragement of Medical

	Rs.	As.	P.	Rs.	As.	P.
To Depreciation, Investments revalued on 31-12-35 .. ..	....			10	8	0
Balance as per Balance Sheet— Rs. 700, 3½% G.P.N., 1854-55 ..	669	6	0			
Surplus at date .. ..	10	5	8			
	<hr/>			679	11	8
				<hr/>		
				690	3	8

## STATEMENT No. 7.

1935.

*Servants' Pension Fund*

Founded in 1876 as the Piddington Pension Fund

	Rs.	As.	P.	Rs.	As.	P.
To Purchase of Investments during the year .. ..	....			195	5	5
Depreciation, Investment revalued on 31-12-35 .. ..	....			46	1	5
Balance as per Balance Sheet— Rs. 3,000, 3½% G.P.N., 1854-55 ..	2,868	12	0			
Surplus at date .. ..	20	1	6			
	<hr/>			2,888	13	6
				<hr/>		
				3,130	4	4

## STATEMENT No. 5.

*Fund Account, in Account with A.S.B.*

1935.

the cataloguing and binding of Arabic and Persian Manuscripts, acquired and for the preparation of notices of Arabic and Persian various Libraries in India.

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	....			4,536	9	0
Government grant for 1935-36	..	....			5,000	0	0

9,536 9 0

## STATEMENT No. 6.

*Fund Account, in Account with A.S.B.*

1935.

General, I.M.S., for the foundation of a medal for the and Biological Science.

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	....			658	1	10
Interest realized for the year	..	....			32	1	10

690 3 8

## STATEMENT No. 7.

*Account, in Account with A.S.B.*

1935.

with Rs. 500 odd from the Piddington Fund.

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	....			2,838	13	9
Interest realized for the year	..	....			96	1	2
Investment Account, credited at cost	.. .. .	....			195	5	5

3,130 4 4

**STATEMENT No. 8.**  
**1935.**

*Annandale Memorial Fund*  
From donations by subscription,

	Rs.	As.	P.	Rs.	As.	P.
To Depreciation, Investments revalued on 31-12-35 .. .. .				60	0	0
Balance as per Balance Sheet—						
Rs. 4,000, 3½% G.P.N., 1854-55 ..	3,825	0	0			
Surplus at date .. .. .	351	5	9			
				4,176	5	9
				4,236	5	9

**STATEMENT No. 9.**  
**1935.**

*Permanent Library Endowment*  
From gifts received,

	Rs.	As.	P.	Rs.	As.	P.
To Purchase of Investments .. .. .				976	11	1
Depreciation, Investments revalued on 31-12-35 .. .. .				215	7	1
Balance as per Balance Sheet—						
Rs. 14,000, 3½% G.P.N., 1854-55 ..	13,387	8	0			
Surplus at date .. .. .	211	5	8			
				13,598	13	8
				14,790	15	10

**STATEMENT No. 10.**  
**1935.**

*Sir William Jones Memorial*  
From a sum gifted for the purpose in

	Rs.	As.	P.	Rs.	As.	P.
To Cost of a Medal .. .. .				289	14	0
Depreciation, Investments revalued on 31-12-35 .. .. .				45	0	0
Balance as per Balance Sheet—						
Rs. 3,000, 3½% G.P.N., 1854-55 ..	2,868	12	0			
Surplus at date .. .. .	16	3	0			
				2,884	15	0
				3,219	13	0

**STATEMENT No. 11.**  
**1935.**

*Pramathanath Bose Memorial*  
From a sum gifted for the purpose in

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 800, 3½% G.P.N., 1842-43 } ..				1,721	4	0
„ 1,000, „ „ 1865 } ..						
				1,721	4	0

**STATEMENT No. 8.***Account, in Account with A.S.B.*  
started in 1926.

1935

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..		....		4,102	6	7
Interest realized for the year	..		....		133	15	2
					<hr/>		
					4,236	5	9

**STATEMENT No. 9.***Fund Account, in Account with A.S.B.*  
started in 1926.

1935.

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..		....		13,352	11	3
Interest realized for the year	..		....		461	9	6
Investment Account, credited at	at						
Cost .. ..	..		....		976	11	1
					<hr/>		
					14,790	15	10

**STATEMENT No. 10.***Fund Account, in Account with A.S.B.*  
1926, by Dr. U. N. Brahmachari.

1935.

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..		....		3,115	5	0
Interest realized for the year	..		....		104	8	0
					<hr/>		
					3,21	13	0

**STATEMENT No. 11.***Fund Account, in Account with A.S.B.*  
1935.

1935.

		Rs.	As.	P.	Rs.	As.	P.
By Investment Account. Amount							
received from Sir B. L. Mitter as							
Donation, 3½% G.P. Notes, per contra	....				1,721	4	0
					<hr/>		
					1,721	4	0

## STATEMENT No. 12.

1935.

*Joy Gobind Law Memorial*

From a donation for the purpose in 1929,

	Rs. As. P.	Rs. As. P.
To Depreciation, Investments revalued on 31-12-35 .. .. .	....	45 0 0
Balance as per Balance Sheet—		
Rs. 3,000, 3½% G.P.N., 1854-55 ..	2,868 12 0	
Surplus at date .. .. .	264 7 0	
		3,133 3 0
		3,178 3 0

## STATEMENT No. 13.

1935.

*Building Fund*

From a sum of Rs. 40,000 given by the Government of India proceeds of a portion

	Rs. As. P.
To Balance as per Balance Sheet .. .. .	6,321 9 6
	6,321 9 6

## STATEMENT No. 14.

1935.

*Calcutta Science Congress Prize*

	Rs. As. P.	Rs. As. P.
To Depreciation, Investments revalued on 31-12-35 .. .. .	....	45 0 0
Balance as per Balance Sheet—		
Rs. 3,000, 3½% G.P.N., 1854-55 ..	2,868 12 0	
Surplus at date .. .. .	672 3 7	
		3,540 15 7
		3,585 15 7

## STATEMENT No. 15.

1935.

*Dr. Brühl Memorial Fund*

From a sum gifted for the purpose in 1929, by

	Rs. As. P.	Rs. As. P.
To Cost of a Medal .. .. .	....	9 6 0
Depreciation, Investments revalued on 31-12-35 .. .. .	....	15 0 0
Balance as per Balance Sheet—		
Rs. 1,000, 3½% G.P.N., 1854-55 ..	956 4 0	
Less Deficit at date .. .. .	10 1 0	
		946 3 0
		970 9 0

## STATEMENT No. 12.

*Fund Account, in Account with A.S.B.*

1935.

by Dr. Satya Churn Law.

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	3,073 15 0
Interest realized for the year	..	....	104 4 0

3,178 3 0

## STATEMENT No. 13.

*Account, in Account with A.S.B.*

1935.

towards the rebuilding of the Society's premises, and from the sale of the Society's land.

			Rs. As. P.
By Balance from last Account	..	..	6,321 9 6
			6,321 9 6

## STATEMENT No. 14.

*Fund Account, in Account with A.S.B.*

1935.

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	3,481 11 7
Interest realized for the year	..	....	104 4 0

3,585 15 7

## STATEMENT No. 15.

*Account, in Account with A.S.B.*

1935.

the Brühl Farewell Committee.

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	935 13 0
Interest realized for the year	..	....	34 12 0

970 9 0



## STATEMENT No. 16.

1935

*Building Repair*

			Rs.	As.	P.
To Building Repairs	..	..	132	0	0
To Balance as per Balance Sheet	..	..	7,868	0	0
			<hr/>		
			8,000	0	0

## STATEMENT No. 17.

1935.

*International Catalogue of Scien-*

			Rs.	As.	P.
To Balance as per Balance Sheet	..	..	4,374	7	8
			<hr/>		
			4,374	7	8

## STATEMENT No. 18.

1935.

*Provident Fund Ac-*

From contributions by the

			Rs.	As.	P.	Rs.	As.	P.
To Amount paid during the year	..	..	....			291	2	10
Balance as per Balance Sheet—								
Rs. 5,000, 3% G.P.N., 1941	..	..	5,190	10	0			
„ 6,000, 5-years Postal Cash Cer-	..	..						
tificates	..	..	5,287	8	0			
Savings Bank and Advances	..	..	5,185	11	6			
			<hr/>			15,663	13	6
						<hr/>		
						15,955	0	4

## STATEMENT No. 19.

1935.

*Advances*

			Rs.	As.	P.
To Balance from last Account	..	..	1,605	0	0
Payments during the year	..	..	275	0	0
			<hr/>		
			1,880	0	0

## STATEMENT No. 16.

*Fund Account, in Account with A.S.B.*

1935.

			Rs.	As.	P.
By Balance from last Account	..	..	6,000	0	0
Transfer from A.S.B. General Fund	..	..	2,000	0	0
			8,000	0	0

## STATEMENT No. 17.

*tific Literature, in Account with A.S.B.*

1935.

			Rs.	As.	P.
By Balance from last Account	..	..	4,374	7	8
			4,374	7	8

## STATEMENT No. 18.

*count, in Account with A.S.B.*

1935.

Society and its Staff.

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	..	....			14,057	3	10
Staff Contribution for the year	..	..	701	1	0			
Society's Contribution for the year	..	..	685	2	0			
Interest realized during the year	..	..	139	10	6			
						1,525	13	6
Interest realized from Savings Bank, etc.	..	..	53	3	0			
Appreciation, Investments revalued on 31-12-35	..	..	318	12	0			
						371	15	0
						15,955	0	4

## STATEMENT No. 19.

*Account, in Account with A.S.B.*

1935.

			Rs.	As.	P.
By Refunds during the year	..	..	745	0	0
Balance as per Balance Sheet	..	..	1,135	0	0
			1,880	0	0

## STATEMENT No. 20.

1935.

*Personal*

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Account ..	....			4,971	1	3
Advances .. ..	....			2,762	8	0
Asiatic Society's Subscriptions, etc... ..	11,685	10	9			
Subscriptions to Journal and Pro- ceedings, and from Book Sales, etc.	5,410	0	2			
				17,095	10	11

24,829 4 2

## STATEMENT No. 21.

1935.

*Publication Fund*

From sale proceeds

	Rs.	As.	P.	Rs.	As.	P.
To Books returned, etc. ..	....			150	8	0
Publications of the A.S.B. ..	....			5,410	0	2
Balance as per Balance Sheet ..	....			7,236	7	0

12,796 15 2

## STATEMENT No. 20.

*Account.*

1935.

	Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts during the year ..	....			20,609	10	5
Bad Debts written-off, A.S.B. ..	943	0	0			
Books returned, etc. ..	150	8	0			
				1,093	8	0
Balance as per Balance Sheet ..	....			3,126	1	9

Outstandings.	Amount due to Society.			Amount due by Society.		
	Rs.	As.	P.	Rs.	As.	P.
Members	8,078	15	0	459	18	0
Subscribers	1	0	0	24	0	0
Bill Collector's						
Deposit				330	0	0
Miscellaneous	1,283	1	9	483	2	0
	4,373	0	9	1,246	15	0

24,829 4 2

## STATEMENT No. 21.

*Account, in Account with A.S.B.*

1935.

of publications.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			7,197	15	9
Cash Sales of Publications ..	....			188	15	3
Credit Sales of Publications, etc. ..	3,946	0	2			
Subscriptions to Journal and Proceedings, etc. ..	1,464	0	0			
				5,410	0	2
				12,796	15	2

## STATEMENT No. 22.

1935.

## (1) Deposit Account

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Account ..	y...			2,291	13	10
Deposit of Contributions during the year .. .. .	1,386	3	0			
Deposit of Advances returned ..	746	0	0			
Deposit of Interest realized during the year .. .. .	140	4	6			
	<hr/>			2,272	7	6
Interest realized for the year 1935 ..	....			53	3	0
				4,617	8	4

## STATEMENT No. 23.

1935.

## (2) Deposit Account

			Rs.	As.	P.
To Balance from last Account .. .. .	..	..	30,000	0	0
Deposit during the year .. .. .	..	..	45,100	0	0
			<hr/>		
			75,100	0	0

## STATEMENT No. 24.

1935

## (3) Deposit Account

			Rs.	As.	P.
To Deposit during the year .. .. .	..	..	15,000	0	0
			<hr/>		
			15,000	0	0

1936]

*Receipts and Disbursements.*

81

**STATEMENT No. 22.***(Savings Bank Deposit with Imperial Bank of India).* 1935.

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	Rs.	As.	P.	Rs.	As.	P.
By Withdrawal for Staff Advances, etc.	....			566	2	10
Balance as per Balance Sheet ..	....			4,051	5	6

---

 4,617 8 4
 

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**STATEMENT No. 23.***(Fixed Deposit with Central Bank of India).* 1935.

---

			Rs.	As.	P.
By Withdrawals during the year ..	..		50,100	0	0
Balance as per Balance Sheet ..	..		25,000	0	0
			75,100	0	0

---

**STATEMENT No. 24.***(Fixed Deposit with Imperial Bank of India).* 1935.

---

			Rs.	As.	P.
By Balance as per Balance Sheet ..	..		15,000	0	0
			15,000	0	0

---

## STATEMENT No. 25.

1935.

## (4) Investment

		Rs. As. P.		Rs. As. P.	
To Balance from last Account .. ..		...		3,17,399 4 0	
Purchases during the year:					
Servants' Pension Fund .. ..		195 5 5			
Permanent Library Endowment Fund		976 11 1		1,172 0 6	
Pramathanath Bose Memorial Fund ..		....		1,721 4 0	
				<u>3,20,292 8 6</u>	

Face Value Rs.	FUNDS.	Rate in Rs %	31st December, 1935, Valuation		31st December, 1934, Valuation including * purchases during the year.		Depreciation or * Appreciation.	
			Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
ASIATIC SOCIETY OF BENGAL.								
PERMANENT RESERVE.								
16,700	3½% G.P. Notes, 1842-43	...	}					
1,58,700	3½% G.P. Notes, 1854-55	...						
44,900	3½% G.P. Notes, 1865 ..	..						
6,000	3½% G.P. Notes, 1879	..						
30,900	3½% G.P. Notes, 1900-01	..						
2,51,500		95 10 -		2,40,496	14 0			
500	3% G.P. Notes, 1896-97	98 4 -		481	4 0			
TEMPORARY RESERVE								
20,200	3½% G.P. Notes, 1900-01	... 95 10 -		19,316	4 0			
11,400	4½% Loan, 1953-60	... 116 10 -		13,295	4 0			
				2,73,589	10 0	2,77,616	12 0	4,077 2
BARCLAY MEMORIAL FUND.								
700	3½% G.P. Notes, 1854-55	... 95 10 -		669	6 0	679	14 0	10 8
SERVANTS' PENSION FUND								
3,000	3½% G.P. Notes, 1854-55	... 95 10 -		2,808	12 0	2,719	8 0	46 1
						• 195	5 5	
ANNANDALE MEMORIAL FUND.								
4,000	3½% G.P. Notes, 1854-55	... 95 10 -		3,825	0 0	3,885	0 0	(8) 0
PERMANENT LIBRARY ENDOWMENT FUND.								
14,000	3½% G.P. Notes, 1854-55	... 95 10 -		13,387	8 0	12,626	4 0	215 7
						• 976	11 1	
SIR WILLIAM JONES MEMORIAL FUND.								
3,000	3½% G.P. Notes, 1854-55	... 95 10 -		2,868	12 0	2,913	12 0	45 0
PRAMATHANATH BOSE MEMORIAL FUND								
800	3½% G.P. Notes, 1842-48	} 95 10 -		1,721	4 0	1,721	4 0	...
1,000	3½% G.P. Notes, 1865							
JOY (GOBIND) LAW MEMORIAL FUND								
3,000	3½% G.P. Notes, 1854-55	... 95 10 -		2,868	12 0	2,913	12 0	45 0
CALCUTTA SCIENCE CONGRESS PRIZE FUND.								
3,000	3½% G.P. Notes, 1854-55	... 95 10 -		2,868	12 0	2,913	12 0	45 0
DR BRÜHL MEMORIAL FUND.								
1,000	3½% G.P. Notes, 1854-55	... 95 10 -		956	4 0	971	4 0	15 0
8,17,100	Carried over	...		8,05,574	0 0	8,10,188	2 6	4,559 2

## STATEMENT No. 25.

Account

1935.

		Rs.	As.	P.	Rs.	As.	P.
By Depreciation, Investments revalued on							
31st December, 1935	..	....			4,240	6	6
Balance as per Balance Sheet	..	....			3,16,052	2	0

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 3,20,292 8 6
 

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Face Value Rs.	FUNDS.	Rate %	31st December, 1935, Valuation.		31st December, 1934, Valuation including purchases during the year.		Depreciation or Appreciation.	
			Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
3,17,100	Brought forward	..	3,05,574	0 0	3,10,133	2 6	4,559	2 6
	PROVIDENT FUND.							
5,000	3% Loan, 1941	.. 103.13-	5,190	10 0	5,050	6 0		
6,000	Post Office 5-year Cash Certificates	.. 88.2-	5,287	4 0	5,100	0 0	187	12 0
			10,478	2 0	10,150	6 0		
3,28,100		..	3,16,052	2 0	3,20,292	8 6	4,240	6 6



## STATEMENT No. 26.

1935.

*Cash*

For the year ended 31st

To	Rs.	As.	P.	Rs.	As.	P.
Balance from last Account ..	....			10,789	8	6
General Fund Account ..	33,137	8	4			
Oriental Publication Fund No. 1 Account ..	7,200	0	0			
Sanskrit Manuscripts Fund Account ..	5,440	0	0			
Arabic and Persian Manuscripts Fund Account ..	5,000	0	0			
Barclay Memorial Fund Account ..	32	1	10			
Servants' Pension Fund Account ..	96	1	2			
Annandale Memorial Fund Account ..	133	15	2			
Permanent Library Endowment Fund Account ..	461	9	6			
Sir William Jones Memorial Fund Account ..	104	8	0			
Joy Gobind Law Memorial Fund Account ..	104	4	0			
Calcutta Science Congress Prize Fund Account ..	104	4	0			
Dr. Brühl Memorial Fund Account ..	34	12	0			
Provident Fund Account ..	1,525	13	6			
Advances Account ..	745	0	0			
Personal Account ..	20,609	10	5			
Publication Fund Account ..	188	15	3			
Savings Bank Deposit Account, Imperial Bank of India, Calcutta ..	566	2	10			
Fixed Deposit Account, Central Bank of India, Calcutta ..	50,100	0	0			
				1,25,584	10	0
				1,36,374	2	6

## STATEMENT No. 26.

*Account.*

1935.

December, 1935.

By	Rs.	As.	P.	Rs.	As.	P.
General Fund Account .. ..	51,576	6	10			
Oriental Publication Fund No. 1 Account	3,242	0	0			
Oriental Publication Fund No. 2 Account	3,222	4	3			
Sanskrit Manuscripts Fund Account ..	3,691	0	0			
Arabic and Persian Manuscripts Fund Account .. ..	2,967	12	0			
Servants' Pension Fund Account ..	195	5	5			
Permanent Library Endowment Fund Account .. ..	976	11	1			
Sir William Jones Memorial Fund Account	289	14	0			
Dr. Bruhl Memorial Fund Account ..	9	6	0			
Building Repair Fund Account ..	132	0	0			
Provident Fund Account .. ..	291	2	10			
Advances Account .. ..	275	0	0			
Personal Account .. ..	2,762	8	0			
Savings Bank Deposit Account, Imperial Bank of India, Calcutta .. ..	2,272	7	6			
Fixed Deposit Account, Central Bank of India, Calcutta .. ..	45,100	0	0			
Fixed Deposit Account, Imperial Bank of India, Calcutta. .. ..	15,000	0	0			
				1,32,003	13	11
Balance as per Balance sheet—						
In hand .. ..	92	7	3			
With the Imperial Bank of India on Current Account .. ..	4,277	13	4			
				4,370	4	7
				1,36,374	2	6

## STATEMENT No. 27.

1935.

*Balance**As at 31st*

## LIABILITIES.

	Rs.	As.	P.	Rs.	As.	P.
General Fund Account .. ..	2,75,327	13	5			
Oriental Publication Fund No. 1 Account ..	1,583	1	11			
Sanskrit Manuscripts Fund Account ..	16,443	1	3			
Arabic and Persian Manuscripts Fund Account .. ..	4,068	13	0			
Barclay Memorial Fund Account ..	679	11	8			
Servants' Pension Fund Account ..	2,888	13	6			
Annandale Memorial Fund Account ..	4,176	5	9			
Permanent Library Endowment Fund Account .. ..	13,598	13	8			
Sir William Jones Memorial Fund Account ..	2,884	15	0			
Pramathanath Bose Memorial Fund Account .. ..	1,721	4	0			
Joy Gobind Law Memorial Fund Account ..	3,133	3	0			
Building Fund Account ..	6,321	9	6			
Calcutta Science Congress Prize Fund Account .. ..	3,540	15	7			
Dr. Brühl Memorial Fund Account ..	946	3	0			
Building Repair Fund Account ..	7,868	0	0			
International Catalogue of Scientific Literature Account .. ..	4,374	7	8			
Provident Fund Account ..	15,663	13	6			
Publication Fund Account ..	7,236	7	0			
				3,72,457	8	5
				3,72,457	8	5

We have examined the above Balance Sheet and the appended detailed accounts with the Books and Vouchers presented to us and certify that they are in accordance therewith, and, in our opinion, set forth correctly the position of the Society as at 31st December, 1935

PRICE, WATERHOUSE, PEAT & Co.,

*Calcutta.*  
31st January, 1936

*Auditors,*  
*Chartered Accountants,*  
*Registered Accountants.*





## [APPENDIX IV.]

### Abstract Proceedings Council, 1935.

(Rule 48 f.)

#### ACCOMMODATION—

Office accommodation to the National Institute of Science. The General Secretary to see whether the north front room on the ground floor can be conveniently vacated and placed at the disposal of the Institute. The Secretary and Dr. Hora to decide final arrangement.  
No. 5. 28-1-35.

Report use of the Society's Hall for a Council Meeting of the National Institute of Sciences of India. Action approved.  
No. 1. 29-4-35.

Request for the use of the Society's hall by the Mining and Geological Institute of India. Action approved.  
No. 3. 29-7-35.

Request for the use of the Society's Hall by the Mining and Geological Institute of India. Grant : General Secretary's letter approved.  
No. 1. 25-11-35.

#### ANNUAL MEETING—

Annual Meeting. Arrangements approved.  
No. 7. 28-1-35.

Annual report. Approved.  
No. 8. 28-1-35.

#### ASSOCIATE MEMBERS—

Report death of Fr. H. Hosten, S.J. Announce. General Secretary to prepare an obituary notice.  
No. 2. 29-4-35.

#### BUILDING—

Recommendation Finance Committee No. 3(b) of 22-2-35.  
Estimates periodical repairs to the building. The General Secretary and Honorary Treasurer to consider and make recommendations to Special Finance Committee before next following Council. Accepted by Council.  
No. 6. 25-2-35.

#### COMMITTEES—

Constitution of Standing Committees of the Society for 1935-36. The Standing Committees to be constituted as below :—

(a) *Finance Committee :*

President	}	<i>Ex-officio.</i>
Treasurer		
General Secretary		
Dr. A. M. Heron.		
Dr. J. N. Mukherjee.		

(b) *Library Committee :*

President	} <i>Ex-officio.</i>
Treasurer	
General Secretary	
Philological Secretary	
Jt. Philological Secretary	
Biological Secretary	
Physical Science Secretary	
Anthropological Secretary	
Medical Secretary	}
Library Secretary	

(c) *Publication Committee :*

President	} <i>Ex-officio.</i>
Treasurer	
General Secretary	
Philological Secretary	
Jt. Philological Secretary	
Biological Secretary	
Physical Science Secretary	
Anthropological Secretary	
Medical Secretary	}
Library Secretary	

No. 4.

25-2-35.

Fixing dates for the next Council and Committee Meetings. The Council and Committee Meetings to be held on Monday, the 16th December, 1935.

No. 10

25-11-35.

## CONDOLENCES—

Notice of decease of M. L. Finot, first Director of the French School of the Far East. Express the Society's condolences.

No. 1.

24-6-35.

Report receipt of news of death of (a) two Fellows Col. H. W. Acton and Dr. P. J. Bruhl, and (b) three former members of the Society, Sir John Thompson, Sir D. P. Sarvadhikary, and Dr. G. N. Mukhopadhyaya. Record and Announce.

No. 16.

30-9-35.

## CONGRATULATIONS AND THANKS—

Outgoing Council. The Chairman expressed the Council's thanks to the outgoing members of Council for their services rendered to the Society and for their valued support given to the Council.

Resolved that the Council's thanks be conveyed to the outgoing members, and a special vote of thanks to Sir R. N. Mookerjee.

No. 15.

28-1-35.

Donation from Sir B. L. Mitter for the institution of a medal in memory of the late Mr. P. N. Bose. Accept with thanks. The General Secretary to put up draft of rules.

No. 3.

25-2-35.

Report presentation by Baron Ow Wachendorf of the Official German Record of International Policies of the Great European Powers from 1871-1914 in 40 volumes. Record with thanks to donor.

No. 1.

29-7-35.

Presentation by Sir B. L. Mitter of a portrait of the late Mr. P. N. Bose. Accept with thanks to donor.

No. 1.

26-8-35.

#### COUNCIL—

Outgoing Council. The Chairman expressed the Council's thanks to the outgoing members of Council for their services rendered to the Society and for their valued support given to the Council.

Resolved that the Council's thanks be conveyed to the outgoing members, and a special vote of thanks to Sir R. N. Mookerjee.

No. 15.

28-1-35.

Acceptance of seats on the Council by Council members. Record.

No. 1.

25-2-35.

Recommendations of the Finance Committee of 22-2-35. Accept. Also resolved that the General Secretary (Mr. Johan van Manen) be authorised to officiate as Honorary Treasurer to the Society during the absence of the Honorary Treasurer, Dr. S. L. Hora, from 11th March, 1935, until notification of the latter's return to Calcutta and resumption of office.

No. 6.

25-2-35.

Absence of Philological Secretary from Calcutta. Record. Request Dr. Chatterji to represent the Society at the 19th International Congress of Orientalists at Rome.

No. 1.

27-5-35.

Absence of Physical Science Secretary from Calcutta. Record.

No. 2.

27-5-35.

Absence of Honorary Treasurer from Calcutta. Resolved. That the General Secretary (Mr. Johan van Manen) be authorised to officiate as Honorary Treasurer to the Society during the absence of the Honorary Treasurer, Dr. S. L. Hora, from Thursday, the 26th September, 1935, until notification of the latter's return to Calcutta and resumption of office.

No. 5.

30-9-35.

Fixing dates for the next Council and Committee Meetings. The Council and Committee Meetings to be held on Monday, the 16th December, 1935.

No. 10.

25-11-35.

Informal consideration of the composition of Council for 1936-37

After discussion, the following list of candidates for nomination to next year's Council was placed before the meeting for consideration.

President	..	..	H. E. Sir John Anderson.
Vice-President	..	..	Sir David Ezra.
"	..	..	Sir U. N. Brahmachari.
"	..	..	Lt.-Col. R. Knowles.
"	..	..	Sir B. L. Mitter.
General Secretary	..	..	Johan van Maren.
Treasurer	..	..	Dr. S. L. Hora.
Phil. Secretary	..	..	Dr. S. K. Chatterji.
Jt. Nat. Secretary	..	..	Dr. M. Hidayat Hosain.
Nat. Hist. Secretary (Biology)	..	..	Dr. Baini Prashad.
" " (Phys. Sci.)	..	..	Dr. J. N. Mukherjee.
Anthropological Secretary	..	..	R. B. R. Chanda.



Medical Secretary ..	..	Lt.-Col. R. N. Chopra.
Library Secretary ..	..	Dr. A. M. Heron.
Member of Council ..	..	Mr. Percy Brown.
" " ..	..	Mr. C. C. Calder.
" " ..	..	Mr. N. G. Majumdar.
" " ..	..	Mr. N. Barwell.
" " ..	..	Mr. K. C. Mahindra.
" " ..	..	Mr. M. Mahfuzul Haq.

Resolved that the General Secretary do print and circulate to the members of Council the list of the members of the Council as at present constituted together with the new list placed before the meeting and provided with a blank column for additional names and these lists be returned to the General Secretary within a week of date of issue; and that a list be compiled of the candidates finally proposed and be placed before the next Council Meeting to be voted upon.

No. 11.

25-11-35.

Council nomination, 1936-37. The General Secretary reported that all Council members had returned the list of candidates circulated, duly signed and unanimously approved without any alternate suggestion. Resolved that the list of names placed before the Council in November Council Meeting be declared that of the Council candidates for election to next year's Council, and that it be ordered to be issued to the Resident Members, as prescribed in Rule 44.

No. 12.

16-12-35.

#### DONATION—

Appeal from Sir C. C. Ghose Memorial Committee. A donation of Rs. 50 be given to the fund.

No. 13.

28-1-35.

Letter from the President suggesting to give a donation of Rs. 150 to the Quetta Earthquake Relief Fund. Send Rs. 150. Invite contributions from Council Members and Ordinary Members.

No. 2.

24-6-35.

Recommendation. Finance Committee No. 2 of 21-6-35. Suggestion from the President to donate a sum of Rs. 150 to the Quetta Earthquake Relief Fund from the Society. Recommended that Rs. 150 be paid at once and that subscriptions be invited from Council and members to maximum individual contribution of Rs. 10. Accepted by Council.

No. 4.

24-6-35.

Report response to the appeal for donation for the Quetta Earthquake Relief Fund. Record.

No. 2.

29-7-35.

#### EXCHANGE OF PUBLICATIONS—

Request for exchange of publications from Lingnan Science Journal, Lingnan University, Canton, China. Exchange Journal. Attempt to be made to obtain complete set by exchange.

No. 12.

29-7-35.

Request for exchange of publication from the Book Exchange Department, U.S.S.R. Society for cultural relations with Foreign Countries, Moscow. Grant.

No. 13.

29-7-35.

Request for exchange of publication from Institut für Volkerkunde der Universität, Wien, Austria. Exchange Journal.

No. 14.

29-7-35.

Application for exchange of publications from the Government Epigraphist for India Exchange Journal, Letters.

No. 1.

28-10-35.

Exchange of publications. Offer exchange with Journal Sinensia and Journal of the Sze Chuan Research Society.

No. 10.

28-10-35.

#### FELLOWS—

Report receipt of news of death of (a) two Fellows Col. H. W. Acton and Dr. P. J. Bruhl, and (b) three former members of the Society, Sir John Thompson, Sir D. P. Sarvadlukary and Dr. G. N. Mukhapadhyaya. Record and Announce.

No. 16.

30-9-35.

#### FINANCE—

Recommendation Finance Committee No. 3 of 25-1-35. Application from Duftris Ebrahim and Nawab Jan to be allowed to contribute to the Society's Provident Fund. Grant to Ebrahim; hold over the case of Nawab Jan. Accepted by Council.

No. 9.

28-1-35.

Appeal from Sir C. C. Ghose Memorial Committee. A donation of Rs. 50 to be given to the fund.

No. 13.

28-1-35.

Letter from the Government of Bengal regarding remuneration for work in connection with the preparation of the Descriptive Catalogue of Sanskrit MSS. Accept recommendation Finance Committee.

No. 2.

25-2-35.

Recommendation Finance Committee No. 3(a) of 22-2-35. Auditors' report for the year 1934. Record. The Honorary Treasurer to consider and report on necessary action. Accepted by Council.

No. 6.

25-2-35.

Recommendation Finance Committee No. 3(b) of 22-2-35. Estimates periodical repairs to the building. The General Secretary and Honorary Treasurer to consider and make recommendations to Special Finance Committee before next following Council. Accepted by Council.

No. 6.

25-2-35.

Recommendation Finance Committee No. 3(c) of 22-2-35. Remuneration to Mr. C. Chakravarti, Sanskrit MSS. Catalogue. Accept proposal if Council agrees; Mr. Chakravarti is required to submit a monthly progress statement of work. Accepted by Council.

No. 6.

25-2-35.

Recommendation Finance Committee No. 3(d) of 22-2-35. Withdrawal resignation, Cashier. Accept. Accepted by Council.

No. 6.

25-2-35.

Recommendations of the Finance Committee of 22-2-35. Accept. Also resolved that the General Secretary (Mr. Johan van Manen) be authorised to officiate as Honorary Treasurer to the Society during the absence of the Honorary Treasurer, Dr. S. L. Hora, from 11th March, 1935, until notification of the latter's return to Calcutta and resumption of office.

No. 6.

25-2-35.

Recommendation Finance Committee No. 3(a) of 22-3-35. Report by the Honorary Treasurer regarding outstanding amounts due to Society on account of sale of books referred to by the Auditors in their last report, etc. Action approved. Treasurer to take such further action as he thinks fit. Accepted by Council.

No. 3.

25-3-35.

Finance Committee No. 7 of 26-4-35. Additional Investments: Invest Rs. 1,000—Face Value  $3\frac{1}{2}\%$  paper for Permanent Library Fund. Invest Rs. 200 Face Value  $3\frac{1}{2}\%$  paper for Servants' Pension Fund. Recommended that the various Permanent Investments be simplified by amalgamation of small investments in single or rounded amounts if this can be done with little expense and without administrative difficulty. Accepted by Council.

No. 6.

29-4-35.

Finance Committee No. 8 of 26-4-35. Simplification investments. Recommended that the various Permanent investments be simplified by amalgamation of small investments in single or rounded amounts if this can be done with little expense and without administrative difficulty. Accepted by Council.

No. 6.

29-4-35.

Recommendation Finance Committee No. 9 of 26-4-35. Staff Salary increments. That the increments be given with effect from the beginning of the current year. Council order: Accept, with addition of Rs. 5 increase to Pandit B. B. Mukherjee with effect from 1st January, 1935.

No. 6.

29-4-35.

Recommendations of the Finance Committee of 26-4-35. Accept, with addition of Rs. 5 increase to Pt. B. B. Mukherjee with effect from 1st January, 1935.

No. 6.

29-4-35.

Recommendation Finance Committee No. 3 of 24-5-35. Letter from the Imperial Bank of India, Park Street Branch, regarding interest allowed on Fixed Deposits. Record. The Honorary Treasurer kindly to consider at the occasion of the next temporary investment falling due, investment in: (a) Treasury Bills for different periods, (b) Fixed Deposit, Imperial Bank, and to make recommendations. Accepted by Council.

No. 4.

27-5-35.

Finance Committee No. 4 of 24-5-35. Conversion Investment Fund Accounts. Except for Permanent and Temporary reserve funds consolidate all holdings into single papers of  $3\frac{1}{2}\%$  Government Loan of 1854-55, exchanging where necessary other scrip held into the scrip indicated. Accepted by Council.

No. 4.

27-5-35.

Recommendation Finance Committee No. 5 of 24-5-35. Increment of salary to menial staff. Increment to menials recommended according to the Honorary Treasurer's proposals. Accepted by Council.

No. 4.

27-5-35.

Recommendation Finance Committee No. 6 of 24-5-35. Application from Abdul Ghani, Library Duftri. The Honorary Treasurer to look into the matter and to make recommendation. Accepted by Council.

No. 4.

27-5-35.

Letter from the President suggesting to give a donation of Rs. 150 to the Quetta Earthquake Relief Fund. Send Rs. 150. Invite contributions from Council Members and Ordinary Members.

No. 2.

24-6-35.

Recommendation Finance Committee No. 2 of 21-6-35. Suggestion from the President to donate a sum of Rs. 150 to the Quetta Earthquake Relief Fund from the Society. Recommended that Rs. 150 be paid at once and that subscriptions be invited from Council and members to maximum individual contribution of Rs. 10. Accepted by Council.

No. 4.

24-6-35.

Removal of 10 names under Rule 38. Apply rules. Announce as removed from the member list under Rule 38.

No. 8.

24-6-35.

Report response to the appeal for donation for the Quetta Earthquake Relief Fund. Record.

No. 2.

29-7-35.

List of 14 members who are in arrears with subscriptions. Apply Rules.

No. 11.

29-7-35.

Absence of Honorary Treasurer from Calcutta. Resolved: That the General Secretary (Mr. Johan van Manen) be authorised to officiate as Honorary Treasurer to the Society during the absence of the Honorary Treasurer, Dr. S. L. Hora, from Thursday, the 26th September, 1935, until notification of the latter's return to Calcutta and resumption of office.

No. 5.

30-9-35.

Application from Shah Moinuddin Ahmad. Grant remission for two months without force of precedent.

No. 7.

30-9-35.

Application from Duftri Chummu. Restitute pay list deduction last month on compassionate allowance to applicant and also to other members of staff whose pay has been cut under similar circumstances.

No. 8.

30-9-35.

Application from Typist, N. Gupta. Leave granted for two weeks on half pay.

No. 9.

30-9-35.

Recommendation Finance Committee No. 9 of 24-9-35. Application from the Staff for Jubilee Bonus. Refer to Jubilee Committee. Accepted by Council.

No. 11.

30-9-35.

Finance Committee No. 10 of 24-9-35. Letter from Dr. Hora to Dr. Heron suggesting the purchase of 3 volumes of drawings on Indian Zoology. Recommendation: Council may be pleased to make a supplementary budget grant of Rs. 500 for the purchase, if possible, to be met wholly or partly by reappropriation from various budget heads at the end of the year. Accepted by Council.

No. 11.

30-9-35.

Recommendations of the Finance Committee of 24-9-35. Accept with the modifications dealt with above.

No. 11.

30-9-35.

Recommendation Finance Committee No. 2(b) of 25-10-35. Statement of Receipts and Expenditure of the Society for the nine months ending 30th September, 1935. That an additional budget grant of Rs. 700 be made to meet excess of expenditure under salaries, to be found from anticipated surplus income. Accepted by Council.

No. 4.

28-10-35.

Recommendations of the Finance Committee of 25-10-35. Accept, including the recommendations regarding an additional Budget grant.

Also resolved that the Honorary Treasurer be hereby authorised to transfer all temporary reserve funds to the Imperial Bank on fixed deposit when and as seems practical to him. For the intervening period moneys available may be deposited with the Central Bank on fixed deposit.

Also resolved that the Honorary Treasurer be hereby authorised to open a current account of Rs. 1,000 with an approved exchange bank as a permanent advance to obtain cheques for remittances to foreign countries and to be replenished from time to time when needed.

No. 4.

28-10-35.

Removal of names under Rule 40. Apply rules.

No. 8.

28-10-35.

Authority to make payments of bills during the end of the year. Resolved that the Hon. Treasurer and General Secretary be authorised to sign for and make payments of outstandings exceeding Rs. 100 during the period between the last Council Meeting of the year and the close of the year.

No. 12.

25-11-35.

Notice regarding the re-assessment from the Calcutta Corporation. Action approved.

No. 1.

16-12-35.

Recommendations of the Special Finance Committee of 13-12-35. Budget estimates for 1936. Accept. All fans to be replaced subject to funds being available.

No. 5.

16-12-35.

#### FURNITURE—

Recommendations of the Special Finance Committee of 13-12-35. Budget estimates for 1936. Accept. All fans to be replaced subject to funds being available.

No. 5.

16-12-35.

#### INDIAN MUSEUM—

Representation of the Society on the Board of Trustees of the Indian Museum. Sir U. N. Brahmachari to be the Society's representative.

No. 2.

25-11-35.

## INDIAN SCIENCE CONGRESS—

Recommendation of the Indian Science Congress Calcutta Prize Advisory Board. Accept the Board's recommendation, Dr. M. N. Saha.

No. 4.

28-1-35.

## JUBILEE CELEBRATIONS—

Anniversary Commemoration Volume. The General Secretary reported progress of preparation. Record. Division of editorial labours to be ascertained from previous records, and materials to be distributed accordingly to the members concerned.

No. 1 (special)

14-3-35. -

## KAMALA LECTURESHIP—

Representation on the Selection Committee, Kamala Lectureship, Calcutta University. Sir U. N. Brahmachari to be the Society's representative.

No. 1.

28-1-35.

## LEASE—

Letter from the Standard Oil Co. of New York, Calcutta, requesting to assign the lease to the revised name of the Company as 'Standard Vacuum Oil Co.', Calcutta. That the General Secretary be empowered to make the required assignment on behalf of the Council.

No. 11.

29-4-35.

## LECTURES—

Proposed General Lecture by Mr. Sharma. N. G. Majumdar kindly to advise and on his recommendation an opportunity to be given to Mr. Sharma to expose his views to the public in the Society's hall.

No. 12.

29-4-35.

Public Lectures, winter session, 1935-36. Council members are invited to make offers of lecture to the General Secretary. The General Secretary to report in the next meeting.

No. 5.

29-7-35.

## LIBRARY—

Application for the loan of Dr. E. Herzfeld's 'Paikuli' from Mr. M. B. Darbari. Grant loan.

No. 1.

30-9-35.

Letter from Dr. S. L. Hora to Dr. A. M. Heron suggesting the purchase of a set of watercolour drawings of Indian plants and fishes. Ask to send on approval; safe return guaranteed; to be purchased if approved upon examination.

No. 4.

30-9-35.

Finance Committee No. 10 of 24-9-35. Letter from Dr. Hora to Dr. Heron suggesting the purchase of 3 volumes of drawings on Indian Zoology. Recommendation: Council may be pleased to make a supplementary budget grant of Rs. 500 for the purchase, if possible, to be met wholly or partly by reappropriation from various budget heads at the end of the year. Accepted by Council.

No. 11.

30-9-35.

## LOAN OF MSS.—

Report on manuscripts lent out during the month. Record. Recall manuscript of Sahasrika Prajna paramita within 10 days from date. Further resolved : that in future rules shall be strictly applied.

No. 1.

25-3-35.

Application for loan of Manuscripts from (1) Dr. P. C. Bagchi and (2) Dr. R. C. Majumdar : (1) Lend Buddhakalpa Tantra manuscript to Dr. Bagchi on bond of Rs. 200 ; (2) The Manuscript ' Habib-us-Sujar ' not to be loaned out ; to be kept in special custody.

No. 3.

29-4-35.

Application for loan of manuscripts from the Punjab University Library. Record.

No. 4.

29-7-35.

Report on manuscripts lent out during the month and new loan applications. Record. Issue after observation of usual formalities.

No. 3.

26-8-35.

Application for the loan of five Persian Manuscripts from the Librarian, Allahabad University. Grant loan Nos. 1, 2 and 5 ; decline that of Nos. 3 and 4 on account of rarity.

No. 2.

30-9-35.

Application for the loan of four Sanskrit Manuscripts from Mr. T. R. Chintamani, Madras. Ask Dr. Heron for the original application and grant loan.

No. 3.

30-9-35.

Report on manuscripts lent out during the month. Record. The Allahabad University may be allowed to execute a general bond for Rs. 1,000 as security against manuscripts to be lent to them from time to time.

No. 3.

28-10-35.

Applications for loan of Manuscripts from the Society : (a) Registrar, University of Madras ; (b) Bhandarkar Oriental Research Institute, Poona ; (c) M. Ramakrishna Kavi, Madras : (a) Only two MSS. to be lent out against Indemnity Bond for their value ; (b) Write that either a hand-written copy may be arranged for or a mechanical reproduction. Advice to be obtained regarding the use of the Society's reproducing apparatus ; (c) The applicant to be asked to apply for the manuscripts through Gaekwad's Oriental Institute or through any recognised Institution in Madras.

No. 5.

25-11-35.

## MANUSCRIPTS--

Letter from the Deputy Director to the Government of India, Department of Education, Health and Lands, to the Director General of Archaeology in India, regarding a collection of Manuscripts to be loaned to the Asiatic Society of Bengal. Accept, terms of letter of acceptance to be settled by General Secretary in consultation with Mr. N. G. Majumdar.

No. 9.

26-8-35.

**MEETINGS—**

Consideration of the programme of the Ordinary Monthly Meeting, May, 1935 : (1) No meeting on the 6th May, Monday, on account of their Majesty's Jubilee Celebration. (2) The routine matters to be announced in the next General Meeting. (3) The Treasurer and General Secretary to arrange moderate gratuities to the menial staff.

No. 9.

29-4-35.

Date of next Ordinary Monthly Meeting. Next meeting in November.  
No. 14. 30-9-35.

**MEMBERSHIP—**

Associate Membership. A special Council to be held on the 14th or 15th March for the consideration of the Anniversary commemoration volume ; the institution of Associate Membership ; and the application for a Royal title.

No. 9.

25-2-35.

Associate membership. Resolved that the proposal for the creation of a new form of Associate membership be rejected. That a Sub-Committee consisting of Sir U. N. Brahmachari, Dr. J. N. Mukherjee, and Mr. Van Manen be constituted to review the general question and to report.

No. 2 (special).

25-3-35.

List of members in arrears with subscriptions. Apply Rules.

No. 10.

29-4-35.

Removal of 10 names under Rule 38. Apply rules. Announce as removed from the member list under Rule 38.

No. 8.

24-6-35.

List of 14 members who are in arrears with subscriptions. Apply Rules.

No. 11.

29-7-35.

Removal of 7 names under Rule 40. Apply rules.

No. 8.

28-10-35.

**MEMORIALS -**

Recommendation of the Sir William Jones Medal Advisory Board. Accept the Board's recommendation, Sir U. N. Brahmachari.

No. 2.

28-1-35.

Recommendation of the Bruhl Memorial Medal Advisory Board. Accept the Board's recommendation, Mr. I. H. Burkill.

No. 3.

28-1-35.

Recommendation of the Indian Science Congress Calcutta Prize Advisory Board. Accept the Board's recommendation, Dr. M. N. Saha.

No. 4.

28-1-35.

Donation from Sir B. L. Mitter for the institution of a medal in memory of the late Mr. P. N. Bose. Accept with thanks. The General Secretary to put up draft of rules.

No. 3.

25-2-35.

Framing of Regulations regarding the award of the ' Pramatha Nath Bose Memorial Medal ' : Draft approved with the additional clause



suggested by the General Secretary. To be recorded that the Medal Fund will be debited with the costs of making a die for the medal and that this debit will be gradually refunded to the Society from surplus of revenue over expenditure.

(1) The Medal shall be awarded every three years at the Ordinary Annual Meeting of the Asiatic Society of Bengal in February.

(2) The Medal shall be bestowed on a person who, in the opinion of the Council has made conspicuously important contributions to practical or theoretical Geology with special reference to Asia.

(3) The General Secretary shall at a meeting of the Council preceding the Ordinary Meeting in November place before the meeting the names of at least three Geological Experts and three members of the Society for consideration.

The Council shall then proceed to appoint an Advisory Board of not less than three members selected from the list placed before them provided that the Council, for special reasons, shall be entitled to select persons outside the list. The Advisory Board shall always include two Geological Experts and the General Secretary shall be an ex-officio member of the Board.

(4) The Advisory Board shall be termed 'The Pramatha Nath Bose Memorial Medal Advisory Board'. The Board shall appoint a Chairman from amongst its members who shall have a casting vote (in addition to his own vote) in the event of the number of votes being equally divided.

(5) The General Secretary shall call a meeting of the Advisory Board on the first convenient date subsequent to the first Monday of December, at the same time requesting members to bring with them to the meeting a detailed statement of the work or attainments of such candidates as they may wish to propose. The General Secretary shall also place before the Board for consideration detailed statements of the work or attainments of any other candidate submitted by any Fellow of the Society. The Board shall make such arrangements as may be necessary for the selection of a name to be submitted to the Council at their December meeting.

(6) Notwithstanding anything determined in these Regulations, it shall be within the competence of the Board to abstain from the selection of any name to be submitted for the year and to report accordingly to the Council, in which case, provided the Council concurs, the award for the year shall lapse.

No. 4.

29-4-35.

Recommendation Finance Committee No. 3 of 22-8-35. Letter from Sir U. N. Brahmachari suggesting that the period of award of Sir William Jones Memorial Medal may be changed from two years to three years. Recommend to Council the acceptance of the suggestion of Sir U. N. Brahmachari. Accepted by Council.

No. 4.

26-8-35.

Letter from Sir U. N. Brahmachari regarding the Sir William Jones Memorial Medal. Accept Sir U. N. Brahmachari's suggestion and change the period of the award into a triennial one. Further resolved that the advice of Sir B. L. Mitter be asked with regard to the wording of clause 6 of the Pramatha Nath Bose Memorial Medal, and that after revision by Sir B. L. Mitter this wording to be also adopted for all other medal awards in substitution of the present clause 6.

No. 8.

26-8-35.

Matters relating to the Regulations regarding the award of the 'Pramatha Nath Bose Memorial Medal'. Accept Sir B. L. Mitter's suggestions and modify accordingly clauses 1 and 6 of the regulations for all other awards.

No. 6.

30-9-35.

Appointment of Advisory Board for the award of: (a) *Barclay Memorial Medal*; (b) *Joy Gobind Law Memorial Medal*.

(a) The Board to consist of:

The President,  
Biological Secretary,  
Medical Secretary,  
Dr. S. L. Hora, and  
The General Secretary

with power to co-opt additional members;

(b) The Board to consist of:

The President,  
Biological Secretary,  
Dr. S. L. Hora,  
Dr. S. C. Law,  
Col. R. N. Chopra, and  
The General Secretary

with power to co-opt additional members.

No. 2.

28-10-35.

Recommendation of the Barclay Memorial Medal Advisory Board. Accept the Board's Recommendation, Dr. B. Sahni.

No. 9.

16-12-35.

Recommendation of the Joy Gobind Law Memorial Medal Advisory Board. Accept the Board's Recommendation, Prof. L. S. Berg.

No. 10.

16-12-35.

#### MISCELLANEOUS—

Letter from Prof. Vogel requesting back numbers of the Journal for the Kern Institute, Leiden, Holland, forwarded by Dr. Hora. Present one copy of every item of which more than 20 copies are available.

No. 2.

25-3-35.

Letter from the Private Secretary to H.E. the Viceroy regarding the Society's application for a Royal Charter. Record.

No. 2.

26-8-35.

Cessation of the excavations of Mohenjo Daro. A Sub-Committee consisting of Sir B. L. Mitter, Mr. Percy Brown, R. B. R. Chanda and Mr. Van Manen to draft a letter to be considered in circulation.

No. 3.

25-11-35.

Notification from the Calcutta Corporation regarding the Municipal Election. General Secretary to represent the Society.

No. 2.

16-12-35.

#### NATIONAL INSTITUTE OF SCIENCES OF INDIA—

Office accommodation to the National Institute of Science. The General Secretary to see whether the north front room on the ground floor can be conveniently vacated and placed at the disposal of the Institute. The Secretary and Dr. Hora to decide final arrangement.

No. 5.

28-1-35.

Report use of the Society's Hall for a Council Meeting of the National Institute of Sciences of India. Action approved.

No. 1.

29-4-35.

Representation of the Society on the Council of the National Institute of Sciences of India. Col. Chopra and Mr. Caldar to be the Society's representatives.

No. 3.

16-12-35.

#### PRESENTATIONS—

Report presentation by Baron Ow Wachendorf of the Official German Record of International Policies of the Great European Powers from 1871-1914 in 40 volumes. Record with thanks to donor.

No. 1.

29-7-35.

Presentation by Sir B. L. Mitter of a portrait of the late Mr. P. N. Bose. Accept with thanks to donor.

No. 1.

26-8-35.

#### PROVIDENT FUND.—

Recommendation Finance Committee No. 3 of 25-1-35. Application from Duftris Ebrahim and Nawab Jan to be allowed to contribute to the Society's Provident Fund. Grant to Ebrahim, hold over the case of Nawab Jan. Accepted by Council.

No. 9.

28-1-35.

Recommendation Finance Committee No. 5 of 26-7-35. Resignation of Mr. N. M. Ramachandran, File Clerk of the Society. Accept. Provident Fund Share to be paid for 5 years according to the regulations. Accepted by Council.

No. 7.

29-7-35.

#### PUBLICATIONS—

Division of the Journal. The two parts of the Journal to be styled JASB (Letters) and JASB (Science).

No. 14.

28-1-35.

Letter from the Government of Bengal regarding remuneration for work in connection with the preparation of the Descriptive Catalogue of Sanskrit MSS. Accept recommendation Finance Committee.

No. 2.

25-2-35.

Recommendation Finance Committee No. 3(c) of 22-2-35. Remuneration to Mr. C. Chakravarti, Sanskrit MSS. Catalogue. Accept proposal if Council agrees; Mr. Chakravarti is required to submit a monthly progress statement of work. Accepted by Council.

No. 6.

25-2-35.

Anniversary Commemoration Volume. The General Secretary reported progress of preparation. Record. Division of editorial labours to be ascertained from previous records, and materials to be distributed accordingly to the members concerned.

No. 1 (special)

14-3-35.

Recommendation, Publication Committee No. 1 of 25-3-35. Appointment of Secretary for the Publication Committee. Dr. Hora to be requested to accept the Secretaryship. Accepted by Council.

No. 5.

25-3-35.

Recommendation Publication Committee No. 2 of 25-3-35. Resolved that the Press Clerk be instructed to prepare a list of outstanding matter. Also resolved that the General Secretary be authorised to ask for certificates of press-readiness of papers placed before the Publication Committee and to press for speeding up the return of such papers. Accepted by Council.

No. 5.

25-3-35.

Recommendation Publication Committee No. 3 of 11-4-35 :

(a) Present position of the Journal ; (b) Title lines. Journal.

(a) Record with satisfaction ; (b) In the new series the name of the author of article to be on the left-hand side and the title of paper to be on the right-hand side page heading. Council Order : Minutes to be first circulated to the Council before being considered by it. The Publication Secretary to be empowered to act at his discretion in the meantime with reference to all materials in hand in anticipation of sanction.

No. 8.

29-4-35.

Recommendation. Publication Committee No. 5 of 11-4-35. Duties of the Secretary of the Publication Committee and the procedure to be adopted for the meeting of the Committee. Secretary to carry on entire correspondence with the Members of the Publication Committee and to transmit to office instructions to be forwarded to author. General Secretary to correspond with the press. Council Order : Minutes to be first circulated to the Council before being considered by it. The Publication Secretary to be empowered to act at his discretion in the meantime with reference to all materials in hand in anticipation of sanction.

No. 8.

29-4-35.

Recommendations of the Publication Committee. Minutes of the Meeting held on 11th April, 1935, to be first circulated to the Council before being considered by it.

The Publication Secretary to be empowered to act at his discretion in the meantime with reference to all materials in hand in anticipation of sanction.

No. 8.

29-4-35.

#### REPRESENTATION—

Representation of the Society on the Board of Trustees of the Indian Museum. Sir U. N. Brahmachari to be the Society's representative

No. 2.

25-11-35.

Representation of the Society on the Council of the National Institute of Sciences of India. Lt.-Col. R. N. Chopra and Mr. C. C. Calder to be the Society's representatives.

No. 3.

16-12-35.

#### REQUESTS—

Request for exchange of publications from Linguan Science Journal, Linguan University, Canton, China. Exchange Journal. Attempt to be made to obtain complete set by exchange.

No. 12.

29-7-35.

Request for exchange of publication from the Book Exchange Department, U.S.S.R. Society for cultural relations with Foreign Countries, Moscow. Grant.

No. 13.

29-7-35.

Request for exchange of publication from Institut für Volkerkunde der Universität, Wien, Austria. Exchange Journal.

No. 14.

29-7-35.

Application for exchange of publications from the Government Epigraphist for India. Exchange Journal. Letters.

No. 1.

28-10-35.

Exchange of publications. Offer exchange with Journal Sinensia and Journal of the Sze Chuan Research Society.

No. 10.

28-10-35.

Request for the use of the Society's Hall by the Mining and Geological Institute of India. Grant ; General Secretary's letter approved.

No. 1.

25-11-35.

#### ROYAL CHARTER—

Letter from the Private Secretary to H. E. the Viceroy regarding the Society's application for a Royal Charter. Record.

No. 2.

Royal Title. The General Secretary to consult Mr. Justice J. Lort-Williams and the Private Secretary to H.E. the Governor of Bengal and to prepare a draft.

No. 3 (special)

14-3-35,

#### RULES AND REGULATIONS—

Framing of Regulations regarding the award of the 'Pramatha Nath Bose Memorial Medal'. Draft approved with the additional clause suggested by the General Secretary. To be recorded that the Medal Fund will be debited with the costs of making a die for the medal and that this debit will be gradually refunded to the Society from surplus of revenue over expenditure.

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(1) The Medal shall be awarded every three years at the Ordinary Annual Meeting of the Asiatic Society of Bengal in February.

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Letter from Sir U. N. Brahmachari regarding the Sir William Jones Memorial Medal. Accept Sir U. N. Brahmachari's suggestion and change the period of the award into a triennial one. Further resolved that the advice of Sir B. L. Mitter be asked with regard to the wording of clause 6 of the Pramatha Nath Bose Memorial Medal, and that after revision by Sir B. L. Mitter this wording to be also adopted for all other medal awards in substitution of the present clause 6.

No. 8.

26-8-35.

Matters relating to the Regulations regarding the award of the 'Pramatha Nath Bose Memorial Medal'. Accept Sir B. L. Mitter's suggestions and modify accordingly clauses 1 and 6 of the regulations for all other awards.

No. 6.

30-9-35.

**STAFF—**

Recommendation Finance Committee No. 3(d) of 22-2-35. Withdrawal resignation, Cashier. Accept. Accepted by Council.

No. 6.

25-2-35.

Recommendation Finance Committee No. 9 of 26-4-35. Staff Salary increments. That the increments be given with effect from the beginning of the current year. Council order; Accept, with addition of Rs. 5 increase to Pandit B. B. Mukherjee with effect from 1st January, 1935.

No. 6.

29-4-35.

Recommendations of the Finance Committee of 26-4-35. Accept, with addition of Rs. 5 increase to Pandit B. B. Mukherjee with effect from 1st January, 1935.

No. 6.

29-4-35.

Consideration of the programme of the Ordinary Monthly Meeting May, 1935. The Treasurer and General Secretary to arrange moderate gratuities to the menial staff.

No. 9(3).

29-4-35.

Recommendation Finance Committee No. 5 of 24-5-35. Increment of salary to menial staff. Increment to menials recommended according to the Honorary Treasurer's proposals. Accepted by Council.

No. 4

27-5-35.

Recommendation Finance Committee No. 6 of 24-5-35. Application from Abdul Ghani, Library Duffri. The Honorary Treasurer to look into the matter and to make recommendation. Accepted by Council.

No. 4.

27-5-35.

Application from File Clerk, Ramachandran, for leave. Applicant to be examined by Col. Knowles.

No. 9.

24-6-35.

Recommendation Finance Committee No. 5 of 26-7-35. Resignation of Mr. N. M. Ramachandran. File Clerk of the Society. Accept. Provident Fund Share to be paid for 5 years according to the regulations. Accepted by Council.

No. 7.

29-7-35.

Application from Shah Moinuddin Ahmad. Grant remission for two months without force of precedent.

No. 7.

30-9-35.

Application from Duftry Chunnu. Restitute pay list deduction last month on compassionate allowance to applicant and also to other members of staff whose pay has been cut under similar circumstances.

No. 8

30-9-35.

Application from Typist, N. Gupta. Leave granted for two weeks on half pay.

No. 9.

30-9-35.

Recommendation Finance Committee No. 9 of 24-9-35. Application from the Staff for Jubilee Bonus. Refer to Jubilee Committee. Accepted by Council.

No 11.

30-9-35.

#### TAXES—

Notice regarding the re-assessment from the Calcutta Corporation. Action approved.

No. 1.

16 12-35.

**List of  
Patrons,  
Officers, Council Members, Members,  
Fellows, and Medallists  
of the  
Asiatic Society of Bengal,  
On the 31st December, 1935.**



# **PATRONS OF THE ASIATIC SOCIETY OF BENGAL.**

<b>1931</b>	<b>∴</b>	<b>.. H.E. the Earl of Willingdon, G.M.S.I., G.C.M.G., G.M.I.E., G.B.E., Viceroy and Governor- General of India.</b>
<b>1932</b>	<b>..</b>	<b>.. H.E. the Right Honourable Sir John Anderson, P.C., G.C.B., G.C.I.E., Governor of Bengal.</b>
<b>1910-1916</b>	<b>..</b>	<b>Lord Hardinge of Penshurst, K.G., P.C., G.C.B., G.C.M.G., G.C.S.I., G.C.I.E., G.C.V.O. I.S.O.</b>
<b>1917-1922</b>	<b>..</b>	<b>Marquess of Zetland, P.C., G.C.S.I., G.C.I.E.</b>
<b>1922-1927</b>	<b>..</b>	<b>Earl of Lytton, P.C., G.C.S.I., G.C.I.E.</b>
<b>1926-1931</b>	<b>..</b>	<b>Viscount Halifax, K.G., P.C., G.C.S.I., G.C.I.E.</b>
<b>1927-1932</b>	<b>..</b>	<b>Colonel Sir Francis Stanley Jackson, P.C., G.C.I.E.</b>

# OFFICERS AND MEMBERS OF COUNCIL OF THE ASIATIC SOCIETY OF BENGAL DURING THE YEAR 1935.

## Elections Annual Meeting.

### *President*

Sir Lewis Fermor, Kt., O.B.E., A.R.S.M., D.Sc. (London), F.G.S.,  
M.Inst. M.M., F.R.S., F.A.S.B.

### *Vice-Presidents.*

Sir David Ezra, Kt., F.Z.S., M.B.O.U.

Rai Sir Upendra Nath Brahmachari Bahadur, Kt., M.A., M.D., Ph.D.,  
F.S.M.F., F.A.S.B.

Lt.-Col. R. Knowles, B.A. (Cantab.), M.R.C.S., L.R.C.P., I.M.S., F.A.S.B.

The Hon'ble Sir B. L. Mitter, K.C.S.I., Barrister-at-Law.

### *Secretaries and Treasurer.*

General Secretary :—Johan van Manen, Esq., C.I.E., F.A.S.B.

Treasurer :—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S., F.R.S.E., F.A.S.B.

Philological Secretary :—S. K. Chatterji, Esq., M.A., D.Lit. (Lond.).

Joint Philological Secretary :—Shamsu'l 'Ulama Mawlawi M. Hidayat  
Hosain, Khan Bahadur, Ph.D., F.A.S.B.

Natural History Secretaries. { Biology :—Baini Prashad, Esq., D.Sc., F.Z.S.,  
F.R.S.E., F.A.S.B.  
Physical Science :—J. N. Mukherjee, Esq., D.Sc.  
(Lond.), F.C.S. (Lond.).

Anthropological Secretary :—Rai Bahadur Ramaprasad Chanda, B.A.,  
F.A.S.B.

Medical Secretary :—Lt.-Col. R. N. Chopra, C.I.E., M.A., M.B., I.M.S.,  
F.A.S.B.

Library Secretary :—A. M. Heron, Esq., D.Sc. (Edin.), F.G.S., F.R.G.S.,  
F.R.S.E.

### *Other Members of Council.*

L. R. Fawcus, Esq., B.A. (Cantab.), I.C.S.

Percy Brown, Esq., A.R.C.A., F.A.S.B.

The Hon'ble Mr. Justice J. Lort-Williams, K.C., Barrister-at-Law.

C. C. Calder, Esq., B.Sc., F.L.S.

N. G. Majumdar, Esq., M.A.

### APPOINTMENTS, TRANSFERS, AND OTHER CHANGES DURING THE YEAR

Mr Johan van Manen, Acting Honorary Treasurer, *vice* Dr. S. L. Hora,  
absent, from 12-3-35 to 29-3-35, and from 25-9-35 to 15-10-35.

Sir Lewis Fermor, absent from 15-1-35 to 1-2-35; from 18-4-35 to 5-8-35;  
and from 17-9-35 to 1-11-35.

Dr. A. M. Heron, absent from 1-1-35 to 1-4-35; from 15-5-35 to 15-6-35;  
and from 25-9-35 to 18-10-35.

Mr. L. R. Fawcus, absent from 1-1-35 to 15-4-35; from 1-11-35 to  
31-12-35.

Mr. Percy Brown, absent from 1-4-35 to 1-7-35.

Lt.-Col. R. N. Chopra, absent from 18-4-35 to 17-7-35.

Sir B. L. Mitter, absent from 11-4-35 to 25-6-35; and from 1-9-35 to  
1-11-35.

Dr. S. K. Chatterji, absent from 1-5-35 to 1-9-35.

Dr. J. N. Mukherjee, absent from 31-5-35 to 30-9-35.

Sir U. N. Brahmachari, absent from 3-6-35 to 10-7-35.

Mr. C. C. Calder, absent from 1-6-35 to 1-12-35.

R.B. R. Chanda, absent from 5-8-35 to 9-9-35.

Justice Lort-Williams, absent from 15-7-35 to 5-11-35.

**OFFICERS AND MEMBERS OF COUNCIL OF  
THE ASIATIC SOCIETY OF BENGAL  
ELECTED FOR THE YEAR 1936.**

*President.*

H.E. The Rt. Hon'ble Sir John Anderson, P.C., G.C.B., G.C.I.E.

*Vice-Presidents.*

Sir David Ezra, Kt., F.Z.S., M.B.O.U.

Rai Sir Upendra Nath Brahmachari Bahadur, Kt., M.A., M.D.,  
Ph.D., F.A.S.B.

Lt.-Col. R. Knowles, C.I.E., B.A. (Cantab.), M.R.C.S., L.R.C.P.,  
I.M.S., F.A.S.B.

The Hon'ble Sir B. L. Mitter, K.C.S.I., Barrister-at-Law.

*Secretaries and Treasurer.*

General Secretary :—Johan van Manen, Esq., C.I.E., F.A.S.B.

Treasurer :—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S., F.R.S.E.,  
F.A.S.B.

Philological Secretary :—S. K. Chatterji, Esq., M.A., D.Lit.  
(London).

Joint Philological Secretary :—Shamsu'l 'Ulama Mawlawi  
M. Hidayat Hosain, Khan Bahadur, Ph.D., F.A.S.B.

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F.R.S.E., F.A.S.B.  
Physical Science :—J. N. Mukherjee, Esq.,  
D.Sc. (Lond.) F.C.S. (Lond.).

Anthropological Secretary :—Rai Bahadur Ramaprasad Chanda,  
B.A., F.A.S.B.

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I.M.S., F.A.S.B.

Library Secretary :—A. M. Heron, Esq., D.Sc. (Edin.), F.G.S.,  
F.R.G.S., F.R.S.E.

*Other Members of Council.*

Percy Brown, Esq., A.R.C.A., F.A.S.B.

C. C. Calder, Esq., B.Sc., F.L.S.

N. G. Majumdar, Esq., M.A.

Lt.-Col. N. Barwell, M.C., M.A., Barrister-at-Law.

K. C. Mahindra, Esq., B.A. (Cantab.).

M. Mahfuz-ul Haq, Esq., M.A.

## ORDINARY MEMBERS.

R=Resident. N=Non-Resident. F=Foreign. A=Absent. L=Life.

An Asterisk is prefixed to names of Ordinary Fellows of the Society.

Date of Election.		
5-4-22	R	<b>Abdul Ali</b> , ABUL FAIZ MUHAMMAD, M.A., M.B.A.S., F.R.S.L., F.R.G.S., F.R.H.S. 3, Turner Street, Calcutta.
7-3-27	R	<b>Abdul Kadir</b> , A. F. M., M.A. (ALLAHABAD), MAULVIE FAZIL (PUNJAB), MADRASSAH FINAL (CALCUTTA), <i>Professor, Islamia College</i> . 19, Wellesley Square, Calcutta.
2-11-25	N	<b>Acharya</b> , PARAMANANDA, B.Sc., <i>Archæological Scholar</i> Mayurbhanj State, Baripada.
2-3-21	R	<b>Agharkar</b> , SHANKAR PURUSHOTTAM, M.A., PH.D., F.L.S., <i>Sir Rash Behari Ghose Professor of Botany, Calcutta University</i> . 35, Ballygunge Circular Road, Calcutta.
1-1-34	N	<b>Ahmad</b> , MIAN JAMAL-UD-DIN, B.A., B.T., <i>Member, Bureau of Education, Afghanistan</i> . 2, Andarabi, Kabul, Afghanistan.
6-6-17	N	<b>Aiyangar</b> , K. V. RANGASWAMI, RAO BAHADUR, M.A., <i>Late Director of Public Instruction, Travancore; Principal, Central Hindu College, Hindu University</i> . Benares.
6-12-26	N	* <b>Aiyangar</b> , S. KRISHNASWAMI, M.A., PH.D., M.B.A.S., F.R.HIST.S., F.A.S.B., <i>Rajasevasakta, Professor, University of Madras</i> . "Sripadam", 143, Brodies Road, Mylapore, Madras, S
1-12-20	N	<b>Akbar Khan</b> , THE HON'BLE MAJOR NAWAB SIR MOHAMMED, K.B.E., C.I.E., <i>Khan of Hoti</i> . Hoti, N.-W.F.P.
3-7-12	F	<b>Andrews</b> , EGBERT ARTHUR, B.A. c/o The Royal Empire Society, Northumberland Avenue, London, W.C.
3-3-30	L	<b>Ashton</b> , HUBERT SHORROCK, <i>Merchant</i> . Trueloves, Ingates-ton, Essex, England.
3-9-34	R	<b>Auden</b> , JOHN BICKNELL, M.A. (CANTAB.), F.G.S., <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chow-ringhee, Calcutta.
3-11-30	R	<b>Austin</b> , GEORGE JOHN, <i>Sanitary Engineer, Messrs. J. B. Norton &amp; Sons, Ltd.</i> Norton Building, Lalbazar, Calcutta.
4-4-17	N	<b>Awati</b> , P. R., B.A. (CANTAB.), D.I.C., I.E.S., <i>Professor of Zoology</i> . Royal Institute of Science, Mayo Road, Fort, Bombay.
3-3-14	L	* <b>Bacot</b> , J., F.A.S.B. Boulevard Saint-Antoine, 61, Versailles Seine-et-Oise, France.
1-11-26	R	<b>Bagchi</b> , PROBODH CHANDRA, M.A., DR.-ES-LETTRES (PARIS), <i>Member of the A.S. of Paris; Lecturer, Calcutta University</i> . 9, Rustumjee Street, Ballygunge, Calcutta.
1-3-26	R	<b>Bagnall</b> , JOHN FREDERICK, B.Sc., A.M.I.Mech.E., A.M.I.E.E., A.M.Inst.C.E., <i>Consulting Engineer, Messrs. Macneill &amp; Co.</i> 2, Fairlie Place, Calcutta.

Date of Election.		
2-4-24	N	<b>Bahl, K. N., D.SC., D.PHIL., Professor of Zoology, Lucknow University. Badshahbagh, Lucknow.</b>
7-3-27	A	<b>Bake, A. A., Doctorandus Or. Lit. P.O. Santiniketan (c/o The Kern Institute, Leiden, Holland.)</b>
6-2-18	N	<b>Banerjee, NARENDRA NATH, M.I.P.O.E.E., A.M.I.E., Director of Telegraphs, Bombay Circle, Bombay.</b>
5-3-24	R	<b>Banerjee, P. N., M.A. (CANTAB.), A.M.I.E., F.C.U., Civil Engineer. 12, Mission Row, Calcutta.</b>
1-11-26	N	<b>Barhut, THAKUR KISHORESINGH JI, State Historian of Patiala Government. History and Research Department, Patiala.</b>
3-8-31	N	<b>Barua, THE HON'BLE KANAK LAL, RAI BAHADUR, B.L., F.R.S.E., President, Kamarupa Anusundhan Samiti, Minister to the Government of Assam. Rosaville, Nangthymai, Shillong, Assam.</b>
3-12-23	R	<b>Barwell, N. F., LT.-COL. (RETD.), M.C, M.A., Bar.-at-Law. First Floor, 10, Middleton Street, Calcutta (and) Aylmerton House, Aylmerton, Norfolk, England.</b>
6-1-30	A	<b>Bassewitz, COUNT, late Consul-General for Germany. Europe.</b>
4-3-29	R	<b>Basu, THE HON'BLE BEJOY K., C.I.E., M.A., B.L., Solicitor, High Court. 50, Goaltule Road, Bhawanipore, Calcutta.</b>
3-12-24	R	<b>Basu, JATINDRA NATH, M.A., M.L.C., Solicitor. 14, Baloram Ghose Street, Calcutta.</b>
1-3-26	R	<b>Basu, NARENDRA KUMAR, M.L.C., Advocate, High Court. 12, Ashu Biswas Road, Bhawanipore, Calcutta.</b>
2-1-28	R	<b>Basu, NARENDRA MOHAN, M.SC., Professor of Physiology. 63, Hindusthan Park, Ballygunge, Calcutta</b>
7-1-29	R	<b>Basu, SARAT CHANDRA, Advocate. 143, Dhurumtollah Street, Calcutta.</b>
30-9-35	N	<b>Basu, SATYENDRA KUMAR, M.SC., Extra Assistant Conservator of Forests. Clover Cot, Darjeeling.</b>
5-2-34	N	<b>Bates, WILLIAM HAYES, Ceramic Engineer, Burn &amp; Co., Ltd. Ranigunj, Dt. Burdwan.</b>
7-7-09	N	<b>Bazaz, RANGNATH KHEMRAJ, Proprietor, Shri Venkateshwar Press. 7th Khetwadi, Bombay No. 4.</b>
3-7-95	L	<b>Beatson-Bell, REV. SIR NICHOLAS DODD, K.C.S.I., K.C.I.E. Edgecliffe, St. Andrews, Scotland.</b>
7-5-34	R	<b>Bent, WILLIAM ANTONY, Assistant, Messrs. George Henderson &amp; Co., Ltd. 101/1, Clive Street, Calcutta.</b>
4-3-25	R	<b>Benthall, SIR EDWARD C., KT., Merchant. 37, Ballygunge Park, Calcutta.</b>
7-4-09	L	<b>*Bentley, CHARLES A., C.I.E., M.B., D.P.H., D.T.M. &amp; H., F.A.S.B., Professor of Hygiene. University of Egypt, Cairo.</b>
4-6-28	N	<b>Bhadra, SATYENDRA NATH, RAI BAHADUR, M.A., Principal, Jagannath Intermediate College. Nayabazar, Dacca.</b>
1-8-17	R	<b>*Bhandarkar, DEVADATTA RAMKRISHNA, M.A., PH.D., F.A.S.B. 10, Ritchie Road, Ballygunge, Calcutta.</b>
5-4-26	N	<b>Bhatia, M. L., M.SC., Lecturer in Zoology. Lucknow University, Lucknow.</b>
4-11-08	R	<b>Bhattacharya, BISVESVAR, B.A., M.R.A.S. 16, Townshend Road, Bhawanipore, Calcutta.</b>
1-2-22	N	<b>Bhattacharya, VIDHUSHEKHARA, PANDIT, Principal, Vidya bhavana. Visvabharati, Santiniketan, Birbhum.</b>
7-7-24	L	<b>Bhattacharyya, BINOYTOSH, M.A., PH.D., Rajaratna, General Editor, Gaekwad's Oriental Series, and Librarian, Oriental Collections, Baroda State. Baroda.</b>

Date of Election.		
2-4-28	R	<b>Bhattacharyya</b> , NIBARAN CHANDRA, M.A., <i>Professor of Physiology, Presidency College. 19, Hindusthan Road, Ballygunge, Calcutta.</i>
4-6-28	N	<b>Bhattachali</b> , NALINI KANTA, M.A., PH.D., <i>Curator, Dacca Museum. Ramna, Dacca.</i>
6-4-31	R	<b>Bhose</b> , JOTISH CHANDER, M.A., B.L., <i>Advocate, Calcutta High Court. 24A, Ray Bagan Street, Calcutta.</i>
5-2-34	N	<b>Bhuyan</b> , SURYYA KUMAR, RAI BAHADUR, M.A., B.L., A.E.S., <i>Honorary Provincial Director of Historical and Antiquarian Studies, Assam; Professor, Cotton College. Gauhati, Assam.</i>
5-3-28	R	<b>Biswas</b> , CHARU CHANDRA, C.I.E., M.A., B.L., <i>Advocate, High Court. 58, Puddopukur Road, P.O. Elgin Road, Calcutta.</i>
1-8-23	R	<b>Biswas</b> , KALIPADA, M.A. <i>Royal Botanic Garden, Sibpur, Howrah.</i>
3-1-27	N	<b>Bivar</b> , HUGH GODFREY STUART, I.C.S., <i>District and Sessions Judge. Murshidabad.</i>
1-2-93	L	<b>*Bodding</b> , REV. P. O., M.A. (CHRIST.), F.A.S.B. <i>Gullerasveien 27, Vettakollen, Oslo, Norway.</i>
4-11-35	A	<b>Bor</b> , N. L., M.A., D.SC., F.L.S., I.F.S. <i>c/o. The Conservator of Forests, Shillong, Assam.</i>
6-3-95	R	<b>*Bose</b> , SIR JAGADIS CHANDRA, KT, C.S.I., C.I.E., F.R.S., M.A., D.SC., F.A.S.B. <i>Bose Institute, 91, Upper Circular Road, Calcutta.</i>
6-7-25	R	<b>Bose</b> , MANMATHA MOHAN, M.A., <i>Professor Emeritus, Scottish Church College. 19, Gokul Mitra Lane, Hatkhola, Calcutta.</i>
2-3-31	N	<b>Bose</b> , SUDHANSU KUMAR, B.SC. (CAL.), A.R.S.M., B.SC. (MINING) (LONDON), <i>Professor of Mining and Surveying. Indian School of Mines, Dhanbad.</i>
4-5-31	A	<b>Bottomley</b> , JOHN MELLOR, B.A. (OXON), I.E.S., <i>Director of Public Instruction, Bengal. 1, Sunny Park, Ballygunge, Calcutta.</i>
5-12-32	N	<b>Boyle</b> , CECIL ALEXANDER, MAJOR, D.S.O., <i>Adviser in Languages and Secretary to the Board of Examiners. Army Headquarters, Simla.</i>
3-12-34	R	<b>Brahmachari</b> , PHANINDRA NATH, M.SC., M.B. 82/3, <i>Cornwallis Street, Calcutta.</i>
1-1-08	L	<b>*Brahmachari</b> , SIR UPENDRA NATH, KT., RAI BAHADUR, M.A., PH.D., M.D., F.S.M.F., F.A.S.B. 82/3, <i>Cornwallis Street, Calcutta.</i>
7-11-27	N	<b>Brahmachary</b> , SARAT CHANDRA, RAI BAHADUR, M.A., B.T. <i>Kasba Road, Ballygunge, P.O. Dhakuria, 24-Pergs.</i>
3-7-07	L	<b>*Brown</b> , JOHN COGGIN, O.B.E., D.SC., F.G.S., M.I.M.E., M.INST.M.M., M.I.E., F.A.S.B. <i>c/o. Messrs. Grindlay &amp; Co., 54, Parliament Street, Westminster, London, S.W.1.</i>
6-10-09	R	<b>*Brown</b> , PERCY, A.R.C.A., F.A.S.B., <i>Curator, Victoria Memorial. Calcutta.</i>
8-1-96	F	<b>*Burn</b> , SIR RICHARD, KT., C.S.I., F.A.S.B. 9, <i>Staverton Road, Oxford, England.</i>
3-12-34	N	<b>Burt</b> , SIR BRYCE CHUDLEIGH, KT., C.I.E., M.B.E., B.SC., I.A.S., <i>Agricultural Expert, Imperial Council of Agricultural Research. 1, York Road, New Delhi.</i>
2-4-13	R	<b>Calder</b> , CHARLES CUMMING, B.SC., F.L.S., <i>Superintendent, Royal Botanic Garden. Sibpur, Howrah.</i>
1-1-00	R	<b>Campbell</b> , SIR GEORGE R. KT. <i>Partner Messrs Mackin-</i>

Date of Election.		
7-2-27	R	Captain, DARA MANEKSHAW, <i>Merchant</i> . 1, Corporation Street, Calcutta.
1-9-20	R	Chakladar, HARAN CHANDRA, M.A. 28/4, Srimohan Lane, Kalighat, Calcutta.
7-3-32	R	Chakraborty, KETRODE BEHARI, <i>Engineer and Manufacturer</i> . 7, Hindusthan Park, P.O. Ballygunge, Calcutta.
4-7-27	R	Chakravarti, CHINTAHARAN, M.A., <i>Lecturer, Bethune College</i> . 28/3, Sahanagar Road, Kalighat, Calcutta.
3-2-30	N	Chakravarti, M. N., M.Sc., A.T.S. "Gitanjali". 15, Lodge Road, Lahore.
5-6-33	N	Chakravarti, SUSIL KUMAR, M.A., <i>Zemindar</i> . Cooch Behar (Cooch Behar State).
3-1-27	N	Chakravarty, NIRANJANPRASAD, M.A., PH.D. (CANTAB.), <i>Government Epigraphist</i> . Office of the Government Epigraphist, Ootacamund, Nilgiris, S. India.
6-1-30	A	Chakraverti, SHRISH CHANDRA, B.L., <i>Attorney-at-Law, High Court, Calcutta</i> . 2, Marquis Street, Calcutta.
1-9-20	R	*Chanda, RAMAPRASAD, RAI BAHADUR, B.A., F.A.S.B. P. 463, Manoharpukur Road, Kalighat, Calcutta.
3-1-06	L	Chapman, JOHN ALEXANDER, <i>Librarian, Rampur State Library</i> . Rampur.
7-5-28	R	Chatterjea, SIR NALINI RANJAN, KT., M.A., B.L., <i>Retired Judge and sometime acting Chief Justice, Calcutta</i> . 91A, Harish Mukerjee Road, Bhawanipore, Calcutta.
7-2-27	R	Chatterjee, ASHOKE, B.A. (CAL.), B.A. (CANTAB.), <i>Editor, "Welfare"</i> . 91, Upper Circular Road, Calcutta.
27-10-15	F	Chatterjee, SIR ATUL CHANDRA, K.C.I.E., K.C.S.I., <i>Late High Commissioner for India</i> . Withdean, Cavendish Road, Weybridge, Surrey, England.
1-10-20	R	Chatterjee, NIRMAL CHANDRA. 52, Haris Mukerjee Road, Bhawanipore, Calcutta.
4-7-27	R	Chatterjee, PATITPABON, M.A., B.L., <i>Vakil, High Court</i> . 84, Harrison Road, Calcutta.
3-12-34	R	Chatterjee, SISIR CHANDRA, M.D. (EDIN.), M.R.C.P. (EDIN.), D.P.H. (EDIN.), <i>Chief Medical Officer, F.B. Ry.</i> 3, Koilaghath Street, Calcutta.
5-1-31	R	Chatterji, DURGACHARAN, M.A., <i>Lecturer in Sanskrit, Bethune College</i> . P. 317, Jatin Das Road, Kalighat, Calcutta.
4-6-34	N	Chatterji, BIVAN RAJ, PH.D. (London), D.LITT. (PUNJAB), <i>Professor of History, Meerut College</i> . Meerut.
7-5-28	R	Chatterji, KEDAR NATH, B.SC. (LONDON), A.E.C.S. (LONDON). 43, Wellesley Street, Calcutta.
7-6-11	R	Chatterji, KARUNA KUMAR, LT.-COL., I.T.F., M.C., V.H.A.S. 6/1, Wood Street, Calcutta
6-8-24	R	Chatterji, SUNITI KUMAR, M.A. (CAL.), D.LIT. (LONDON), <i>Khaira Professor of Linguistics, Calcutta University</i> . "Sudharma", 16, Hindusthan Park, (off Rasbihari Avenue East End), Ballygunge, Calcutta.
5-11-24	R	Chattopadhyay, K. P., M.B.C., <i>Education Officer, Corporation of Calcutta</i> . 55/1, Old Ballygunge 1st Lane, Calcutta.
2-11-25	N	Chattopadhyaya, KSHETRESA CHANDRA, M.A., <i>Lecturer in Sanskrit</i> . Allahabad University, Allahabad.
1-4-14	R	Chaudhuri, GOPAL DAS. 32, Beadon Row, Calcutta.
6-12-26	R	Chokhani, SREENARAYAN, <i>Secretary, Shree Hanuman Puastkalya</i> . 8, New Ghuseri Road, Salkea, Howrah.
5-12-23	R	Chopra, B. N., D.Sc., F.L.S., <i>Assistant Superintendent, Zoological Survey of India</i> . Indian Museum, Calcutta.

Date of Election.		
1-2-22	R	*Chopra, R. N., C.I.E., M.A., M.D. (CANTAB.), BREVET.-COL., I.M.S., F.A.S.B., <i>Professor of Pharmacology</i> . School of Tropical Medicine and Hygiene, Chittaranjan Avenue, Calcutta.
5-11-28	R	Chopra, GOPICHAND. 47, Khangraputty, Calcutta.
5-12-27	L	Chowdhury, SIR CHHAJURAM, KT., C.I.E., M.L.C. 21, Belvedere Road, Calcutta.
2-4-28	R	Chowdhury, RAI JATINDRANATH, <i>Zemindar</i> . 36, Russa Road, Tollygunge, Calcutta.
3-7-07	L	*Christie, WILLIAM ALEXANDER KYNOCH, B.SC., PH.D., M.INST.M.M., F.A.S.B. c/o The Lloyds Bank, 6, Pall Mall, London, S. W. 1.
3-11-09	A	*Christophers, SIR SAMUEL RICKARD, KT., C.I.E., O.B.E., F.R.S., F.A.S.B., M.B., LT.-COL., I.M.S. 80, Onslow Gardens, South Kensington, London, S.W. 7.
1-9-15	R	Cleghorn, MAUDE LINA WEST (MISS), F.L.S., F.E.S. 43, Moulahat Road, Calcutta.
2-2-31	A	Clough, JOHN, <i>Barrister-at-Law</i> . 17, Store Road, Ballygunge, Calcutta.
4-2-35	N	Cookson, CHRISTOPHER ARTHUR, <i>Assistant, The Bombay Co., Ltd.</i> Delhi.
5-5-30	F	Cooper, G. A. P. 29, Eccleston Street, Eaton Square, London, S.W. 1.
3-9-34	R	Couchman, BRIGADIER HAROLD JOHN, D.S.O., M.C., <i>Surveyor-General of India</i> . Survey of India, 13, Wood Street, Calcutta.
6-11-33	R	Coulson, ARTHUR LENNOX, D.SC. (MELB.), D.I.C., F.G.S. Geological Survey of India, 27, Chowringhee, Calcutta.
4-11-29	L	*Cotter, GERALD DE PURCELL, B.A., SC.D. (DUBLIN), M.INST.M.M., F.G.S., F.A.S.B. "Fallowfield", Manor Road, Penn., Bucks., England.
5-3-34	R	Craddock, SIR WALTER MERRY, KT., D.S.O., COLONEL, M.C., <i>Stock Broker</i> . Bengal Club, Calcutta.
25-8-87	R	Criper, WILLIAM RISDON, F.O.S., F.I.C., A.R.S.M. Konnagar.
2-11-25	A	Crookshank, HENRY, B.A., B.A.I. (DUBLIN), <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
7-3-32	R	Darbari, M. D., <i>Incorporated Accountant, S.B. Billimoria &amp; Co., Ltd.</i> 100, Clive Street, Calcutta.
4-3-25	R	Das, AJIT NATH, RAI BAHADUR, M.R.A.S., F.Z.S., <i>Zemindar</i> . 24, South Road. Entally, Calcutta.
3-12-24	R	Das, SURENDRA NATH, M.B., <i>Medical Practitioner</i> . 67, Nimtala Ghat Street, Calcutta.
6-9-22	R	Das-Gupta, SURENDRA NATH, M.A., PH.D., I.E.S., <i>Principal, Sanskrit College</i> . 1, College Square, Calcutta.
1-3-26	R	Datta, HIRENDRA NATH, M.A., B.L., <i>Solicitor, High Court</i> . 139, Cornwallis Street, Calcutta.
3-6-25	N	Datta, S. K., B.A., M.B., CH.B. (EDIN.), <i>Principal, Forman Christian College</i> . Lahore.
4-6-34	R	Daver, NANABHOY SORABJI, B.A. (HONS.), <i>Mercantile</i> . c/o Parke, Davis & Co., 5, Dhurumtollah Street, Calcutta.
6-8-24	L	Davies, L. M., LT.-COL., LATE R.A., M.A., F.R.S.E., F.R.A.I., F.G.S. 8, Garscube Terrace, Murrayfield, Edinburgh, 12, Scotland.
4-3-29	R	De, J. C., M.B., LT.-COL., I.M.S., <i>Superintendent, Campbell Medical School</i> . 135, Lower Circular Road, Calcutta.



Date of Election.		
19-9-95	L	De, KIRAN CHANDRA, O.I.E., B.A., I.C.S. (RETD.), <i>Manager, Nawab Bahadur of Murshidabad Estate.</i> Lalbigh, Murshidabad.
5-12-32	N	Deb, SUSHIL KUMAR, B.A. Sheikghat, P.O. Sylhet, Dt. Assam.
5-12-27	L	Dechhen, H.H. MAHARANI KUNZANG, <i>Maharani of Sikkim.</i> Gangtok, Sikkim.
5-5-30	N	Deo, SIR PRATAP CHANDRA BHANJ, K.C.I.E., <i>Maharajah, Ruler of Mayurbhanj State.</i> P.O. Baripada, Mayurbhanj, B.N.R.
5-11-34	R	Dey, MUKUL, A.R.C.A. (LOND.), M.C.S.E. (U.S.A.), F.R.S.A., etc., <i>Principal, Govt. School of Art; Officer in charge, Art Section Keeper of Govt. Art Gallery; Trustee, Indian Museum.</i> 28, Chowringhee, Calcutta.
4-5-10	L	Dhavlé, THE HON'BLE MR. JUSTICE SHANKAR BALAJI, B.A., I.C.S., <i>Judge, Patna High Court.</i> Patna.
4-8-20	N	Dikshit, KASHINATH NARAYAN, M.A. c/o The Office of the Director-General of Archaeology, New Delhi.
5-1-98	R	Dods, WILLIAM KANE, <i>Agent, Hongkong and Shanghai Banking Corporation.</i> 6, Minto Park, Alipur, Calcutta.
2-2-31	A	Douglas, GORDON WATSON, B.SC., D.L.M., <i>State Chemist to the Government of Bhopal.</i> State Laboratory, Bhopal, Central India.
2-7-02	L	Doxey, FREDERICK. "Ballygunge", Cooden Drive, Bexhill-on-Sea, Sussex, England.
7-11-32	R	Driver, DARAB CURSETJI, M.A. (CANTAB.), <i>Barrister-at-Law, Constituted Attorney to Messrs. Tata &amp; Sons, Ltd., Managing Agents for The Tata Iron &amp; Steel Co., Ltd.</i> 71/73, Park Street, Calcutta.
7-5-34	R	Duncan, PERCIVAL CAIRNCROSS, <i>Mercantile Assistant with Messrs. George Henderson &amp; Co., Ltd.</i> 101/1, Clive Street, Calcutta.
1-7-29	A	Dunn, JOHN ALEXANDER, D.SC., D.I.C., F.G.S., <i>Assistant Superintendent, Geological Survey of India.</i> 27, Chowringhee, Calcutta.
2-1-33	N	Dutch, ROBERT AUSTEN, B.A. (CANTAB.), I.C.S., <i>District Magistrate.</i> Noakhali.
3-7-33	A	Dutt, GURU SADAY, <i>Barrister-at-Law,</i> I.C.S. 12, Loudon Street, Calcutta.
30-9-35	R	Dutt, MOHENDRA NATH, L.E., <i>Consulting Engineer.</i> 12, Kailas Bone Lane, Howrah.
5-12-32	R	Dutt, NALINAKSHA, M.A., PH.D., D.LITT. (LOND.), <i>Lecturer, Calcutta University.</i> 91-1B, Manicktollah Street, Calcutta.
5-3-28	A	Eberl, OTTO, DR. JUR., <i>Late Vice-Consul for Germany.</i> 2, Store Road, Ballygunge, Calcutta.
4-11-29	R	Edwards, L. BROOKE, <i>Manager in India, The Baldwin Loco. Works of Philadelphia, U.S.A.</i> 5, Dalhousie Square, Calcutta.
5-1-31	L	Evans, PERCY, B.A. (CANTAB.), F.G.S., <i>Geologist.</i> c/o The Burma Oil Co., Digboi, Assam.
6-2-28.	L	Ezra, SIR DAVID, KT., F.Z.S., M.B.O.U. 3, Kyd Street, Calcutta.
2-12-29	N	Fawcus, LOUIS REGINALD, B.A. (CANTAB.), <i>Indian Civil Service, Magistrate and Collector.</i> Dacca.

Date of Election.		
3-8-04	R	*Fermor, SIR LEWIS LEIGH, KT., O.B.E., M.INST.M.M., D.SO., A.R.S.M., F.G.S., F.R.S., F.A.S.B., <i>Director, Geological Survey of India</i> , 27, Chowringhee, Calcutta.
31-10-06	F	Finlow, ROBERT STEEL, C.I.E., B.SO., F.I.C., <i>Late Director of Agriculture, Bengal</i> . c/o Messrs. Grindlay & Co., Ltd., 54, Parliament Street, London, S.W. 1.
4-1-26	F	Fleming, ANDREW. Post Box No. 2436, Johannesburg, S. Africa.
5-11-13	R	Fox, CYRIL S., D.SO. (BIRM.), M.I.M.E., F.G.S. <i>Geological Survey of India</i> , 27, Chowringhee, Calcutta.
2-4-19	A	Friel, RALPH, I.C.S., B.A., B.SC. (DUBLIN), J.P., <i>Deputy Commissioner, Assam</i> . Silchar, Assam.
7-3-27	F	Fukushima, NAOSHIRO. 33, Hikawacho, Akasaka, Tokyo, Japan.
5-11-28	R	Galstaun, JOHN CARAPIET, O.B.E., <i>Merchant and Landholder</i> . 234/4, Lower Circular Road, Calcutta.
1-11-26	R	Galstaun, SHANAZAN, M.A., D.M.B.E., M.R.C.S., L.B.C.P., <i>Medical Practitioner, Radiologist, Medical College Hospital</i> . 39, Theatre Road, Calcutta.
6-10-09	R	*Gangoly, ORDHENDRA COOMAR, B.A., F.A.S.B. 2, Asutosh Mukherjee Road, Calcutta.
5-11-34	R	Gee, EDWARD ROWLAND, M.A. (CANTAB.), F.G.S., <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
2-1-33	R	George, JAMES, B.A. (CANTAB.), I.C.S., <i>Special Officer, Political Department, Govt. of Bengal</i> . United Service Club, Calcutta.
6-2-33	L	Ghatak, JYOTISH CHANDRA, M.A. (TRIPLE), SAHITYA SARASWATI, JYOTISH-SAGARA, <i>Professor</i> . 4, Boloram Boso Ghat Road, Bhawanipore, Calcutta.
7-5-28	R	Ghosal, UPENDRA NATH, M.A., PH.D., <i>Professor of History, Presidency College</i> . 12, Badur Bagan Row, Calcutta.
5-4-26	R	Ghose, BIMAL CHANDRA, <i>Barrister-at-Law</i> . 27/1, Harish Mukherjee Road, Calcutta.
1-4-29	R	Ghose, DEB PROSONNO, <i>Zemindar</i> . 75, Beadon Street, Calcutta.
7-1-20	R	Ghose, THE HON'BLE MR. JUSTICE MOHIM CHANDRA, B.A. (CAL.), M.A. (CANTAB.), I.C.S., <i>Barrister-at-Law (Inner Temple), Judge, High Court</i> . 4A, Little Russell Street, Calcutta.
3-12-24	R	Ghose, SUSHIL CHANDRA, B.A., <i>Deputy Magistrate</i> . 1, Sikdarbagan Street, Calcutta.
2-4-24	R	Ghosh, K., D.T.M., D.P.H. (CANTAB.), L.M.S., <i>Medical Practitioner</i> . 45, Creek Row, Calcutta.
7-3-27	R	Ghosh, PHANINDRA NATH, M.A., PH.D., SC.D. (PADUA), F.INST.P., <i>Sir Rashbehary Ghosh Professor of Applied Physics, University of Calcutta</i> . 92, Upper Circular Road, Calcutta.
4-9-12	R	Ghosh, TARAPADA, <i>Zemindar</i> . 14, Paddapukur Street, Kidderpore, Calcutta.
1-2-26	R	Ghuznavi, SIR ABDUL HALIM, KT., M.L.A., <i>Zemindar</i> . 18, Canal Street, Entally, Calcutta.
6-8-28	R	Ghuznavi, ISKANDER S. K., <i>Zemindar and Member, Advisory Board of Industries, Government of Bengal</i> . 45, Jhowtolla Road, Calcutta (and) Dilduar, Mymensingh.

Date of Election.		
1-2-26	R	<b>Ghuznavi, ALHADJ SIR ABDELKERIM ABU AHMED KHAN, KT., M.L.C., <i>Zemindar of Dilduar.</i> 45, Jhowtolla Road, Calcutta (and) North House, Dilduar, Mymensingh.</b>
3-12-34	R	<b>Gladstone, JOHN, <i>Assistant, Messrs. Gillanders Arbuthnot &amp; Co., Ltd.</i> 8, Clive Street, Calcutta.</b>
5-3-28	R	<b>Gooptu, DWIJENDRA NATH, <i>Medical Practitioner and Landholder.</i> 5, Middleton Street, Calcutta.</b>
7-9-10	N	<b>*Gravelly, FREDERIC HENRY, D.S.C., F.A.S.B. Museum House, Egmore, Madras.</b>
5-12-00	L	<b>Grieve, JAMES WYNDHAM ALLEYNE. c/o Messrs. Coutts &amp; Co., 440, Strand, London, W.C. 2.</b>
4-3-35	R	<b>Groth, EDWARD M., <i>American Consul.</i> American Consulate General, 9, Esplanade Mansions, Esplanade, Calcutta.</b>
4-2-25	R	<b>Guha, B. S., M.A., PH.D. (HARVARD). Indian Museum, Calcutta.</b>
6-12-26	R	<b>Guha, THE HON'BLE MR. JUSTICE SURENDRANATH, RAI BAHADUR, <i>Judge, High Court.</i> 20, Lansdowne Road, Calcutta.</b>
7-5-28	R	<b>Gupta, J. N., M.B.E., C.I.E., I.C.S., <i>Late Member, Board of Revenue, Government of Bengal.</i> 5, Riverside, Barrackpore.</b>
5-3-19	N	<b>Gupta, SIVAPRASAD. <i>Seva Upavana, Benares City.</i></b>
5-8-15	R	<b>Gurner, CYRIL WALTER, B.A. (OXON), I.C.S., <i>Chairman, Improvement Trust.</i> 4, Theatre Road, Calcutta.</b>
6-3-01	N	<b>Habib-ur-RAHMAN, THE HON'BLE NAWAB SADR YAB JUNG, MAULANA, <i>Rais, Bhikanpur.</i> Habibganj, District Aligarh.</b>
5-2-34	R	<b>Haldar, BHARATI VIKAS, M.A., B.L., <i>Advocate, High Court.</i> 47, Haldarpara Road, Kalighat, Calcutta.</b>
6-1-30	R	<b>Haldar, SUDHINDRA KUMAR, M.A., I.C.S., <i>Commissioner of Excise and Salt, Bengal.</i> 241, Lower Circular Road, Calcutta</b>
6-1-30	F	<b>Hamilton, SIR DANIEL MACKINNON, KT., <i>Retired Partner, Messrs. Mackinnon Mackenzie &amp; Co.</i> Balmacara, Rosshire, Scotland.</b>
2-4-24	R	<b>Haq, M. MAHFUZ-UL, M.A., <i>Lecturer, Presidency College.</i> 8/B, Dargah Road, Park Circus, Calcutta.</b>
1-5-12	R	<b>Harley, ALEXANDER HAMILTON, M.A., I.E.S., <i>Principal, Islamia College.</i> 19, Wellesley Square, Calcutta.</b>
1-2-26	F	<b>Harris, H. G. c/o Messrs. Martin &amp; Harris, Ltd., Rowlette Buildings, 17, Prinsep Street, Calcutta.</b>
2-4-28	R	<b>Harris, LAWRENCE ERNEST, <i>Engineer, Manager for India, Messrs. Sulzer Brothers.</i> 4, Lyons Range, Calcutta.</b>
5-11-19	N	<b>Hemraj, MANYABARA RAJ GURU, C.I.E., PANDITJI. Dhokatoke, Nepal.</b>
3-2-30	F	<b>Henderson, ALEXANDER GAVIN, B.A. (OXON). Buscot Park, Faringdon, Berks, England.</b>
6-8-28	R	<b>Heron, A. M., D.S.C. (EDIN.), F.G.S., F.R.G.S., F.R.S.E., <i>Superintendent, Geological Survey of India.</i> 27, Chowringhee, Calcutta.</b>
7-6-11	L	<b>*Hidāyat Hosain, MUHAMMAD, SHAMS 'UL-'ULAMA, KHAN BAHADUR, PH.D., F.A.S.B. 98/2c, Collin Street, Calcutta.</b>
1-2-26	A	<b>Hingston, H., LT.-COL., I.M.S., M.D., <i>Late Surgeon to H.E. the Governor of Bengal.</i> England.</b>
4-11-35	R	<b>Hirtzel, MICHAEL ARTHUR FREDERICK, B.A. (TRINITY COLLEGE, OXFORD), <i>Mercantile Assistant, Macneill &amp; Co.</i> 2, Fairlie Place, Calcutta.</b>

Date of Election.		
4-6-28	N	<b>Hobart, ROBERT CHARLES</b> , I.C.S. Commissioner's House, Gorakhpur, U.P.
1-4-25	R	<b>Hobbs, HENRY</b> , MAJOR, V.D., <i>Merchant</i> . 9, Old Court House Street, Calcutta.
1-2-32	R	<b>Holme, JAMES WILLIAM</b> , M.A., I.E.S. (RETD.), <i>Principal, La Martinière</i> . 11, Loudon Street, Calcutta.
7-3-27	N	<b>Hopkinson, ARTHUR JOHN</b> , I.C.S., <i>Secretary to the Government, N.-W.F. Province</i> . Peshawar, N.-W.F.P.
2-11-21	L	<b>*Hora, SUNDER LAL</b> , D SC., F.Z.S., F.R.S.E., F.A.S.B. Zoological Survey of India, Indian Museum, Calcutta.
5-11-34	R	<b>Hosain, PRINCE AFSAR'UL MULUK MIRZA MUHAMMED AKRAM, BAHADUR</b> , <i>Political Pensioner and Landholder</i> . Afsar Manzil, 20, Ballygunge Circular Road, Calcutta.
6-6-23	L	<b>*Howard, SIR ALBERT</b> , KT., C.I.E., M.A., F.A.S.B., <i>Late Director, Institute of Plant Industry, Indore, and Late Agricultural Adviser to States in Central India</i> . 14, Liskeard Gardens, Blackheath, London, S.E. 3.
2-9-35	N	<b>Howland, FELIX</b> , <i>Professor of English</i> . Habibia College, Kabul, Afghanistan.
7-3-32	N	<b>Hughes, ARTHUR</b> , B A. (MANCHESTER), <i>Indian Civil Service, Magistrate and Collector</i> , Murshidabad, Bengal.
6-8-34	N	<b>Husain, SYED ATA</b> , M A. (CAL.), C.E. (ROORKEE), <i>RETIRED Superintending Engineer, Hyderabad State</i> . Mohalla Lingumpally, Hyderabad, Deccan.
6-6-23	N	<b>*Hutton, J. H.</b> , C.I.E., I.C.S., M.A., D.SC., F.A.S.B. Nowgong, Assam.
1-2-11	L	<b>Insch, JAMES</b> . 18, Beechwood Avenue, Boscombe, Hants, England.
4-3-35	R	<b>Jack, THE HON'BLE MR. JUSTICE ROBERT ERNEST</b> , I.C.S., <i>Judge, High Court</i> . United Service Club, Calcutta.
4-2-35	N	<b>Jaffar, S. M.</b> , B.A., <i>Author, Translator to the Judicial Commissioner, North-West Frontier Province</i> . 1508, Khudadad Street, Peshawar City, N.-W.F.P.
6-6-27	L	<b>Jain, BALDEODAS</b> , <i>Merchant and Banker</i> . 21, Armenian Street, Calcutta.
2-2-21	R	<b>Jain, CHHOTE LAL</b> , M.R.A.S. 25, Central Avenue North, Calcutta.
6-1-30	N	<b>Jain, NIRMAL KUMAR</b> . Devashrama, Arrah.
6-8-28	N	<b>Jaitly, P. L.</b> , <i>Electrical Engineer, Merchant</i> . 15, Canning Road, Allahabad.
1-11-26	F	<b>Jameson, THOMAS BLANDFORD</b> , MAJOR, M.C., M.A. (CANTAB.), I.C.S. Claremont, Kingskerswell, S. Devon, England.
4-11-29	F	<b>Jarvis, ROBERT Y.</b> The Department of State, Washington, District Columbia, U.S.A.
6-5-25	R	<b>Jatia, SIR ONKAR MULL</b> , KT., O.B.E., <i>Merchant</i> . 2, Rupchand Roy Street, Calcutta.
4-2-29	R	<b>Jenkins, WALTER ALLEN</b> , D.SC. (SHEFFIELD), I.E.S., <i>Principal, David Hare Training College</i> . United Service Club, Calcutta.
5-4-26	A	<b>Jones, THORNTON</b> , <i>Solicitor</i> . c/o Messrs. Morgan & Co., 1, Hastings Street, Calcutta.
1-11-11	L	<b>Kamaluddin AHMAD, SHAMS-UL-'ULAMĀ</b> , M.A., I.E.S., <i>Principal, Krishnagar College</i> . Krishnagar, Nadia.
5-3-24	R	<b>Kanjilal, M. N.</b> , M.A. (CAL.), LL.B. (CANTAB.), <i>Barrister-at-Law</i> . 17, Loudon Street, Calcutta.

Date of Election.		
3-12-34	N	Kapur, CHOONI LAL. Makermal Colliery, Mari Indus, Punjab.
6-11-33	R	Kavyatirtha, RAM DHAN, <i>Pundit</i> . 55, Surendranath Banerjee Road, Calcutta.
4-5-10	L	*Kemp, STANLEY W., B.A., D.SC., F.R.S., F.A.S.B. 'Discovery Expedition,' 52, Queen Anne Chambers, Dean Farrar Street, London, S.W. 1.
2-5-30	N	Kenny, DICK EDWARD COURTENAY, LT.-COL., I.A., <i>Deputy Commissioner, Tavoy</i> . Burma.
2-12-29	N	Khan, MATIUR RAHMAN, <i>Khas Mahal Circle Officer</i> . 27, Panchbhaighat, Dacca.
3-12-24	R	Khan, REZAUR RAHMAN, M.A., B.L., <i>Deputy President, Bengal Legislative Council</i> . 28, Convent Road, Entally, Calcutta.
6-5-25	R	Khanna, VINAYEK LAL, M.R.A.S., <i>Merchant</i> . 137F, Balaram Dey Street, Beadon Street P.O., Calcutta.
2-8-26	R	Khettry, BENIMADHO, <i>Proprietor, Messrs. Gouri Shanker Khettry, Landholders, Bankers and Merchants</i> . 15, Paggiyapatti, Barabazar, Calcutta.
2-11-25	F	Kimura, R. (Ko-Shi), <i>Principal, College Department of Rishso University</i> . Osaki Machi, Tokyo, Japan.
5-2-34	N	Kirby, WALTER, B.SC., <i>Inspector of Mines in India</i> . Dhanbad, B.I.R.
4-11-35	R	Klebe, ANINA, née BRANDT, PH.D. (GREIFSWALD, GERMANY), <i>Psychologist</i> . 14/1, Sudder Street, Calcutta.
7-7-20	R	*Knowles, ROBERT, C.I.E., M.B.C.S., L.R.C.P., B.A. (CANTAB.), F.A.S.B., LT.-COL., I.M.S. "Holmscroft", 2/1, Harrington Street, Calcutta.
6-5-25	F	Koester, DR. HANS, <i>Legations Sekretär</i> . Auswaertiges Amt, Abteilung W., Berlin W. 8, Wilhelmstrasse 75.
3-2-30	R	Korni, MICHAEL ALEXANDROWITZ (DR.), <i>Architect and Engineer, Messrs. Bird &amp; Co.</i> Chartered Bank Buildings, Clive Street, Calcutta.
1-3-26	R	Kramrisch, STELLA (MRS.), PH.D., <i>Lecturer in Ancient Indian History (Fine Arts), Calcutta University</i> . 57, Ballygunge Circular Road, Calcutta.
3-9-34	R	Krishnan, K. S., D.Sc., <i>Mahendralal Sircar Professor of Physics, Indian Association for the Cultivation of Science</i> . 210, Bowbazar Street, Calcutta.
6-11-33	A	Krishnan, M. S., M.A. (MADRAS), PH.D. (LOND.), A.R.C.S., D.I.C (LOND.), <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
2-4-28	R	Kumar, KUMAR KRISHNA, M.A., B.L., <i>Zemindar and Banker</i> . 31 & 31-1, Burtolla Street, Calcutta.
7-3-23	R	Labey, GEORGE THOMAS, M.C., <i>Bengal Pilot Service</i> . United Service Club, Calcutta.
4-2-35	R	Lal, RAM BIHARI, M.B., B.S., D.P.H., D.T.M. & H., D.B., <i>Professor of Vital Statistics and Epidemiology, All-India Institute of Hygiene and Public Health</i> . 21, Chittaranjan Avenue, Calcutta.
6-3-89	L	*La Touche, THOMAS HENRY DIGGES, M.A., F.G.S., F.A.S.B. 230, Hills Road, Cambridge, England.
5-2-34	R	Law, BHABANI CHURN, <i>Merchant, Zamindar and Artist</i> . 223, Cornwallis Street, Calcutta.
5-8-14	L	Law, BIMALA CHARAN, M.A., B.L., PH.D., F.R.HIST.S. 43, Kailas Bose Street, Calcutta.

Date of Election.		
1-2-11	R	Law, NARENDRA NATH, M.A., B.L., PH.D. 96, Amherst Street, Calcutta.
4-2-35	R	Law, PARBUTTY CHURN. 223, Cornwallis Street, Calcutta.
1-7-14	R	Law, SATYA CHURN, M.A., B.L., PH.D., F.Z.S., M.B.O.U. 50, Kailas Bose Street, Calcutta.
3-9-34	R	Ledrus, MICHAEL, <i>Professor in Divinity, Lecturer at the Gregorian University, Rome; Member of the Society of Jesus, Editor, 'The New Review'.</i> St. Xavier's College, 30, Park Street, Calcutta.
7-6-26	R	Lemmon, RICHARD DENNIS, <i>Merchant.</i> c/o Messrs. Martin & Harris Ltd., 17, Prinsep Street, Calcutta.
3-5-11	A	Lomax, C. E., M.A. La Martinière, 11, Loudon Street, Calcutta.
1-6-31	R	Lort-Williams, THE HON'BLE MR. JUSTICE JOHN, K.C., <i>Barrister-at-Law, Judge, High Court.</i> 227/1, Lower Circular Road, Calcutta.
5-7-26	A	Lyne, HOWARD WILLIAM, I.C.S. Khulna, E.B.R.
2-8-05	L	*McCay, DAVID, LT.-COL., I.M.S., M.D., B.CH., B.A.O., M.R.O.P., F.A.S.B. c/o The Standard Bank of S. Africa, Cradock, Cape Province, S. Africa.
1-3-26	R	McKay, JOHN WALLACE. c/o Messrs. Duncan Bros. & Co., Ltd., 101, Clive Street, Calcutta.
11-1-93	L	*MacLagan, SIR EDWARD DOUGLAS, K.C.S.I., K.C.I.E., F.A.S.B. 39, Egerton Terrace, London, S.W. 3.
5-3-24	R	McPherson, JAMES. c/o Messrs. Begg Dunlop & Co., Ltd., 2, Hare Street, Calcutta.
7-6-16	N	Mahajan, SURYA PRASAD. Murarpur, Gaya.
3-3-20	R	Mahalanobis, P. C., M.A., B.SC., I.E.S., <i>Professor, Presidency College.</i> 210, Cornwallis Street, Calcutta.
1-3-11	R	Mahtab, SIR BIJAY CHAND, K.C.S.I., I.O.M., MAHARAJA-DHIRAJA BAHADUR OF BURDWAN. 6, Alipur Lane, Calcutta.
3-2-30	N	Mahtab, UDAY CHAND, B.A., <i>Maharaj Kumar of Burdwan.</i> The Palace, Burdwan.
6-2-24	R	Mahindra, K. C., B.A. (CANTAB.). Messrs. Martin & Co., 12, Mission Row, Calcutta.
9-6-20	R	Majumdar, NANI GOPAL, M.A. <i>Archæological Survey of India, Indian Museum, Calcutta.</i>
2-2-16	R	Majumdar, NARENDRA KUMAR, M.A., <i>Professor, Calcutta University.</i> 3, Government Place, West, Calcutta.
4-6-13	N	Majumdar, RAMESH CHANDRA, M.A., PH.D., <i>Professor, Dacca University.</i> Ramna, Dacca.
5-5-30	A	Mallam, G. L., CAPTAIN, I.A., <i>Census Superintendent.</i> Peshawar, N.-W.F.P.
7-5-28	R	Mallik, SATYENDRA CHANDRA, M.A., I.C.S. (REID.). 7-3, Burdwan Road, Alipur, Calcutta.
4-11-29	R	Mallya, BANTWAL GANAPATHY, MAJOR, I.M.S., F.R.C.S.E. <i>Civil Surgeon, Howrah</i>
6-2-18	L	*Manen, JOHAN VAN, C.I.E., <i>Officier de l'Instruction Publique,</i> F.A.S.B. 6, Temple Chambers, 6, Old Post Office Street, Calcutta.
5-6-01	F	Mann, HAROLD HART, D.SC., M.SC., F.I.C., F.L.S. <i>Woburn Experimental Station, Aspley Guise, Bedfordshire, England.</i>
6-1-30	N	Martin, M. F. C., CAPT., R.E. c/o The Garrison Engineer, Mingladon, Burma.

Date of Election.		
5-5-30	A	Matthias, OWEN GARDINER, <i>Managing Director, Messrs. Smith Stanistreet &amp; Co., Ltd. Stanistreet House, 18, Convent Road, Entally, Calcutta.</i>
2-1-28	N	Mello, FROILANO DE, COLONEL, <i>Director-General of Medical Services in Portuguese India, Professor of Parasitology. Nova Goa.</i>
5-11-84	L	*Middlemiss, CHARLES STEWART, C.I.E., F.R.S., B.A., F.G.S., F.A.S.B. <i>Aviemore, Crowborough, Sussex, England.</i>
1-2-26	N	*Mills, JAMES PHILIP, I.C.S., M.A. (OXON), J.P., F.A.S.B., <i>Deputy Commissioner. Kohima, Naga Hills, Assam.</i>
5-6-12	N	Misra, CHAMPA RAM, B.A., <i>Rai Bahadur, Pandit, Diwan, Chhatarpur State. Bundelkhand, C.I.</i>
2-4-24	R	Mitra, J. C., M.A., B.L., <i>Retired Accountant-General, Bengal. 1, Abinash Mitter Lane, Calcutta.</i>
5-3-24	R	Mitter, THE HON'BLE SIB B. L., K.O.S.I., M.A., B.L., <i>Barrister-at-Law, Member, Bengal Executive Council. 5, Outram Street, Calcutta.</i>
5-3-24	R	Mitter, THE HON'BLE MR. JUSTICE DWARKANATH, M.A., D.L., <i>Judge, High Court. 12, Theatre Road, Calcutta.</i>
4-3-29	R	Mitter, HIRANYA KUMAR, <i>Landholder. 1, Jhamapukur Lane, Amherst Street P.O., Calcutta.</i>
5-4-26	R	Mitter, KHAGENDRA NATH, RAI BAHADUR, M.A., <i>Professor, Presidency College (Retired). 72/1, Bondel Road, Ballygunge, Calcutta.</i>
30-9-35	R	Mitter, SUDHIR CHUNDER, <i>Barrister-at-Law. 19, Camac Street, Calcutta.</i>
1-11-26	R	Modi, JAL R. K., B.A. 4, <i>Camac Street, Calcutta.</i>
5-3-34	R	Modi, JEHangir JEEVANJI JAMSHEDJI, <i>Merchant. 5, Dhurumtollah Street, Calcutta.</i>
6-8-24	N	Moloney, WILLIAM J., <i>General Manager of Reuter's for the East. c/o 26/7, Dalhousie Square, Calcutta.</i>
5-11-24	R	Mookerjee, B. N., B.A. (CANTAB.), <i>Engineer. 12, Mission Row, Calcutta.</i>
3 5-98	L	Mookerjee, SIB RAJENDRA NATH, K.C.I.E., K.C.V.O., HON. F.A.S.B. 7, <i>Harington Street, Calcutta.</i>
2-7-24	R	Mookerjee, SYAMA PRASAD, M.A., B.L., <i>Vakil, High Court, Vice-Chancellor, Calcutta University. 77, Russa Road North, Calcutta.</i>
5-6-33	A	Morris, C. J., <i>Captain, Indian Army, 2/3rd Q.A.O. Gurkha Rifles. Razmak, Waziristan.</i>
2-5-32	F	Muhammad, MIRZA, KHAN BAHADUR, C.I.E., LL.B., M.R.A.S., <i>Advocate. Strand Road, Basrah.</i>
2-2-21	R	Mukerjee, SUBODH CHANDRA, SHASTRI, M.A., DOCTEUR-ES-LETTRES (PARIS). 3/1A. <i>Raja Rajabullav Street, Calcutta.</i>
5-12-27	R	Mukerjee, SUSIL KUMAR, F.R.C.S. (EDIN.), D.O. (OXON), D.O.M.S. (LOND.), <i>Ophthalmic Surgeon, Carmichael Medical College Hospitals. 1/1, Wood Street, Calcutta.</i>
6-2-28	R	Mukerji, THE HON'BLE MR. JUSTICE MANMATHA NATH, KT., M.A., B.L., <i>Judge, High Court. 8/1, Harsi Street, Calcutta.</i>
3-3-30	N	Mukharji, ISAN CHANDRA, <i>Rai Bahadur, Tazimi Sardar and Retired Member of Jaipur Council. Jaipur, Rajputana.</i>
7-11-27	N	Mukherjee, DEVAPROSANNA, M.A., B.L., <i>Zemindar. Burdwan.</i>
2-8-26	R	Mukherjee, JNANENDRA NATH, D.SC. (LONDON), F.C.S. (LONDON), <i>Fellow of the Indian Chemical Society; Khaira Professor of Chemistry, University of Calcutta. 92, Upper Circular Road, Calcutta.</i>

Date of Election.		
5-7-26	R	<b>Mukhopadhyaya, PRABHAT KUMAR, M.A.,</b> <i>Research Assistant, Calcutta University.</i> 27, Govinda Ghosal Lane, Bhawanipore, Calcutta.
2-2-21	R	<b>Mukhopadhyaya, RAMAPRASAD, M.A., B.L.</b> 77, Russa Road North, Bhawanipore, Calcutta.
2-4-28	R	<b>Mullick, KARTICK CHURN, KUMAR,</b> <i>Director, Raja D. N. Mullick &amp; Sons, Ltd.</i> Colootola Rajbati, Chittaranjan Avenue, Calcutta.
6-8-34	R	<b>Mullick, MANICK LALL,</b> <i>Landholder ; Honorary Magistrate, Sealdah.</i> 123, Grey Street, Calcutta.
4-3-29	R	<b>Mullick, PRAMATHA NATH, RAI BAHADUR,</b> <i>Zemindar and Landholder.</i> 129, Cornwallis Street, Calcutta.
7-5-28	N	<b>Murray, EUGENE FLORIAN OLIPHANT, A.I.M.M., F.G.S.,</b> <i>Mining Geologist and Engineer.</i> Tatanagar, B.N.Ry.
1-6-21	N	<b>Muzammil-Ullah Khan, THE HON'BLE NAWAB SIR MOHD., KHAN BAHADUR, K.C.I.E., O.B.E, K.B., LL.D.,</b> <i>Rais.</i> Bhikampur, Dt. Aligarh, U.P.
7-3-06	N	<b>Nahar, PURAN CHAND, RAI BAHADUR,</b> <i>Solicitor.</i> c/o 48, Indian Mirror Street, Calcutta.
5-12-27	L	<b>Namgyal, H.H. MAHARAJA SIR TASHI, K.C.I.F.,</b> <i>Maharaja of Sikkim.</i> Gangtok, Sikkim.
6-6-27	N	<b>Nandi, MAHARAJA SRIS CHANDRA, M.A., M.L.C.,</b> <i>Zemindar.</i> Kasimbazar Rajbari, Kasimbazar, Murshidabad.
4-2-29	N	<b>Narain, HIRDE, M.A., B.T.,</b> <i>Professor of History, Morris College.</i> Nagpur, C.P.
5-2-34	N	<b>Nariman, RUSTOM, K., M.I.C.E., A.C.H., F.R.G.S.</b> ( <i>Retired Superintending Engineer, Punjab Irrigation</i> ), <i>Professor of Engineering, Osmania University.</i> 'Gulistan', Sappers Lines, Secunderabad, Deccan.
5-3-28	R	<b>Neogi, PANCHAYAN, M.A., PH.D., I.E.S.,</b> <i>Professor of Chemistry, Presidency College.</i> 21, Kundu Lane, Belgachia, Calcutta.
3 11-30	A	<b>Newman, CARL DAMIEN, M.B.B.S., D.T.M. &amp; H.,</b> <i>District Medical Officer, E.B.Ry.</i> 2, Belvedere Park, Alipur, Calcutta
3-12-24	N	<b>Newman, CHAS F., F.R.G.S., M.R.S.T., M.C.P.</b> Ramnagar, Benares.
7-4-15	F	<b>Ohtani, COUNT KOZUI.</b> San-ya-so, Edomachi, Fushimi, Kyoto, Japan.
5-11-28	R	<b>Oipadvala, E. S.</b> 52, Chowringhee, Calcutta.
3-9-34	R	<b>Ow-Wachendorf, BARON W.,</b> <i>German Consul General, Minister Plenipotentiary.</i> German Consulate General, 26, Lee Road, Calcutta.
5-12-23	N	<b>Pande, SHIVA BANDHAN,</b> <i>Retired Tahsildar and Zemindar.</i> Ramaipatti, Mirzapur, U.P.
5-4-26	R	<b>Parker, RICHARD HENRY, I.C.S.,</b> <i>Late Scholar of St. John's College, Oxford ; Workmen's Compensation Commissioner.</i> Writer's Building, Calcutta.
4-11-29	F	<b>Parry, NEVILL EDWARD, I.C.S. (RETD.).</b> Coombe Fishaere House, Ippelfen, Newton Abbot, S. Devon, England.
5-2-34	R	<b>Pasricha, CHIRANJI LAL, M.A., M.B., B.CHIB. (CANTAB.), M.B.C.S. (ENG.), L.R.C.P. (LOND.), CAPTAIN, I.M.S.,</b> <i>Professor of Pathology, Bacteriology and Helminthology, School of Tropical Medicine and Hygiene.</i> 11, Rowland Road, Calcutta.



Date of Election.		
6-5-29	F	Pawsey, C. R., <i>Indian Civil Service</i> . c/o The Lloyds Bank, 6, Pall Mall, London, S.W. 1.
6-6-88	L	Pennell, AUBRAY PERCIVAL, B.A., <i>Barrister-at-Law</i> . Lamb's Building, Temple, London, E.C. 4.
5-2-34	N	Percival, FREDERICK GEORGE, PH.D. (LOND.), F.G.S., <i>General Superintendent, Ore Mines and Quarries, Tata Iron and Steel Co.</i> Jamshedpur.
1-4-25	R	Perler, FERDINAND, S.J., <i>Most Reverend the Archbishop of Calcutta</i> . 32, Park Street, Calcutta.
7-4-30	A	Pessein, REV. J. F., <i>Catholic Missionary, Superior of the Catholic Missionary Sanatorium</i> . Wellington, Nilgiris.
3-2-30	A	Pettigrew, REV. WILLIAM, <i>Missionary</i> . American Baptist Foreign Mission Society, P.O. Kangpokpi, Manipur, Assam.
6-4-31	N	Prasad, SHARDA. c/o Messrs. Gopinath Lal Behari, Satna.
3-4-18	L	*Prashad, BAINI, D.SC., F.Z.S., F.R.S.E., F.A.S.B., <i>Director, Zoological Survey of India</i> . Indian Museum, Calcutta.
3-8-25	N	Pruthi, HEM SINGH, M.SC. (PUNJAB), PH.D. (LONDON), <i>Imperial Entomologist, Imperial Institute of Agricultural Research</i> . Pusa, Darbhanga.
3-12-24	R	Pushong, E. S., M.D., L.S.A., <i>Medical Practitioner</i> . 1, Chapel Road, Hastings, Calcutta.
3-11-30	R	Rahman, SHAH KALIMUR, M.A., <i>Lecturer in Arabic and Persian, Calcutta University</i> . 51, Baitakhana Road, Calcutta.
6-8-34	R	Rao, U. SHANKER, <i>Bengal Pilot Service</i> . 83, Chowringhee, Calcutta.
1-2-26	N	Rao, Y. RAMACHANDRA, RAO SAHIB, M.A., F.E.S., <i>Locust Research Entomologist</i> . McLeod Road, Karachi.
2-7-24	N	Ray, ABINASH CHANDRA, B.A. R.M.H.E. School, P.O. Baidyabati.
7-9-21	R	Ray, HEM CHANDRA, M.A., PH.D. (LONDON). P.39A, Manicktollah Spur, Calcutta.
5-1-21	N	Ray, JAGADISNATH, MAHARAJA, <i>Maharaja of Dinajpore</i> . Dinajpore.
5-3-90	R	*Ray, SIR PROFULLA CHANDRA, KT., C.I.E., D.SC., F.A.S.B. University College of Science, 92, Upper Circular Road, Calcutta.
5-11-28	L	Reinhart, WERNER, <i>Merchant</i> . c/o Messrs. Volkart Bros., Rychenberg, Winterthur, Switzerland.
6-2-28	R	Reneman, NICO., Kian Gwan Co. (India), Ltd., 4, Lyons Range, Calcutta.
2-4-24	F	Richards, F. J., I.C.S. 6, Lexham Gardens, London, W. 8.
5-2-34	R	Richter, HERBERT, DR. JUR., <i>Vice-Consul for Germany</i> . 26, Lee Road, Calcutta.
1-4-29	A	Rizvi, SYED HAMID HUSAIN, <i>Excise Sub-Inspector</i> . Mohalla Saneohri, Near Muejid of Munshi Sk. Ghassu, Saugor, C.P.
3-12-24	L	Roerich, GEORGE NICHOLAS, M.A., M.R.A.S., <i>Orientalist</i> . 310, Riverside Drive, New York, U.S.A. ("Urusvati" Naggar, Kulu, Punjab).
2-7-28	L	Roerich, NICHOLAS, <i>Professor, Honorary President, Master Institute of United Arts, New York, U.S.A., Artist-Painter</i> . 310, Riverside Drive, New York, U.S.A.
3-12-24	N	Rogers, T. E., <i>Tea Planter</i> . The Tyroom Tea Co., Ltd., Kharikatia, Assam.

Date of Election		
4-12-01	F	*Ross, SIR EDWARD DENISON, KT., C.I.E., PH.D., F.A.S.B., <i>Director, School of Oriental Studies.</i> Finsbury Circus, London, E.C. 2.
5-6-33	R	Rossetti, FELIX FRANCOIS LEO, <i>Secretary, Y.M.C.A.</i> 42, Corporation Street, Calcutta.
6-12-26	R	Roy, A. K., <i>Barrister-at-Law, Advocate-General, Bengal.</i> 3, Upper Wood Street, P.O. Theatre Road, Calcutta.
1-12-30	N	Roy, KUMAR KAMALRANJAN, B.A., <i>Zemindar.</i> Kashmir-bazar Post, Dt. Murshidabad.
4-3-35	R	Roy, SAILESWAR SINGH, <i>Landholder.</i> 15, Lansdowne Road, Calcutta.
6-8-24	N	Roy-Chowdhury, BRAJENDRA KISHORE, <i>Zemindar.</i> (53, Sukea Street, Calcutta.) Gauripur, Mymensingh.
7-5-28	N	*Saha, MEGH NAD, D.SC., F.R.S., F.A.S.B., <i>Professor of Physics, University of Allahabad.</i> Katra, Allahabad.
5-11-24	N	*Sahni, B., M.A., SC.D. (CANTAB.), D.SC., F.G.S., F.A.S.B., <i>Professor of Botany.</i> The University, Lucknow.
5-2-34	L	Sale, HAROLD MONTAGUE, M.A., F.G.S., <i>Geologist, Burmah Oil Co., Ltd.</i> c/o Burmah Oil Co., Ltd., Digboi, Assam.
3-12-24	R	Sarkar, C. K., C.E., <i>Engineer and Architect.</i> 10, Hastings Street, Calcutta.
4-2-35	R	Sarkar, NALINI RANJAN. Hindusthan Buildings, Corporation Street, Calcutta.
4-2-35	N	Sayeduddin, MOHAMMED, B.SC., M.A. (EDIN.), F.R.M.S., F.F.S.C., <i>Professor of Botany, Osmania University.</i> Hyderabad, Deccan.
6-3-33	R	Seal, SATIS CHANDRA, M.A., B.L., <i>Honorary Secretary, Indian Research Institute.</i> 55, Upper Chitpore Road, Calcutta.
5-2-34	R	Selzam, EDWART VON, <i>German Diplomatic Service, Consulate-General for Germany.</i> 26, Leo Road, Calcutta.
1-4-25	R	Sen, BENOY CHANDRA, M.A. 'Rupeswar', Diamond Harbour Road, Behala.
3-12-24	R	Sen, H. K., M.A., D.SC. (LONDON), D.I.C., <i>Professor of Chemistry, University College of Science.</i> 92, Upper Circular Road, Calcutta.
5-12-23	L	Sen, LAKSHMAN, H.H. RAJA OF SUKET. Suket State, Punjab.
1-4-29	R	Sen-Gupta, NARES CHANDRA, M.A., D.L., <i>Advocate, High Court.</i> 36, Girish Mukherjee Road, Bhawanipore, Calcutta.
5-4-26	R	Senior-White, RONALD, F.R.S., F.R.S.T.M. & H., <i>Mulariologist.</i> 5, Godfrey Mansions, Garden Reach, Calcutta.
1-12-97	R	Seth, MESROBY JACOB, M.R.A.S., M.S.A., F.R.S.A., <i>Examiner in Classical Armenian to the Calcutta University.</i> 9, Marsden Street, Upper Flat, Calcutta.
5-7-11	L	*Sewell, ROBERT BERESFORD SEYMOUR, C.I.E., M.A., SC.D. (CANTAB.), M.R.C.S., L.R.C.P., F.Z.S., F.L.S., F.R.S., F.A.S.B., LT.-COL., I.M.S., <i>Late Director, Zoological Survey of India.</i> 18, Barrow Road, Cambridge, England.
2-11-25	A	Sharif, MOHAMMAD, D.SC., F.R.M.S., F.L.S., <i>Lecturer in Zoology.</i> Muslim University, Aligarh.
6-5-29	N	Sharma, SRI RAM, M.A., M.R.A.S., M.A.O.S., <i>Professor of History.</i> D.A.V. College, Lahore.

Date of Election.		
5-8-35	R	Shattock, JOHN SWITHIN HARVEY, B.A. (Oxon.), I.C.S., <i>Assistant Private Secretary to His Excellency the Governor of Bengal.</i> Government House, Calcutta.
2-5-23	N	Shebbeare, E. O., <i>Conservator of Forests.</i> Darjeeling.
6-1-09	N	Shirreff, ALEXANDER GRIEBSON, B.A., I.C.S. <i>Commissioner,</i> Gorakhpur. U.P.
4-1-26	N	Shortt, H. E., LT.-COL., I.M.S., <i>Director, King's Institute,</i> Guindy. Madras.
5-1-31	N	Shukla, JAGANNATH PRASAD. Trans Gomti Outram Road, near Badshahnagar Railway Station, Lucknow.
6-2-28	L	Shumser JUNG BAHADUR RANA, SIR KAISEE, K.B.E., SUPRADEPTA MANYABARA, LIEUT.-GENERAL, <i>Nepalese Army.</i> Kaiser Mahal, Kathmandu, Nepal.
5-2-02	N	Shyam Lal, LALA, M.A., LL.B. Nawabganj, Cawnpore, U.P.
4-11-29	R	Siddiqi, MOHAMMAD ZUBAYR, M.A., PH.D., <i>Sir Asutosh Professor of Islamic Culture, Calcutta University.</i> P. 274, Bright Street, Park Circus, Calcutta.
5-3-13	L	*Simonsen, JOHN LIONEL, D.SC., F.I.C., F.A.S.B. University College of North Wales, Bangor, North Wales.
6-2-18	N	Singh, MANYABARA BADA KAJI MARICHI MAN, PANDITJI, C.I.E. 38, Khichapokhari, Kathmandu, Nepal.
4-11-29	F	Singh, JAIPAL, M.A. ( <i>Modern Greats</i> ), <i>St. John's College, Oxford University.</i> Achimota College, Accra, West Africa.
5-3-34	L	Singh, HIS HIGHNESS THE HON'BLE MAHARAJADHIRAJA SIR KAMESWAR, K.C.I.E. Darbhanga.
2-1-33	N	Singh, RUDRA PERTAB, RAO BAHADUR, <i>Proprietor, Sonbarsa Raj.</i> Sonbarsa P.O., District Bhagalpore.
4-2-35	N	Singh, SARABJIT, M.A., B.L. P.O. Imphal, Manipur State.
3-6-35	R	Singhanla, RAGHUNATH PRASAD, VIDYABHUMAN-VISARAD, <i>Secretary, Rajasthan Research Society.</i> 27, Baranoshi Ghose Street, Simla, Calcutta.
5-9-12	R	Singhi, BAHADUR SINGH. (Azimganj, Murshidabad.) 48, Gariahat Road, Calcutta.
7-8-33	N	Sinh, RAGHUBIR, RAJKUMAR, M.A., LL.B., <i>Heir-Apparent of Sitamau State.</i> Raghurib Niwas, Sitamau, C.I.
7-5-28	F	Sinha, LORD, OF RAIPUR. Queen Anne Mansions, St. James' Park, London.
6-6-27	N	Sinha, SHEONANDAN PRASAD, M.B., <i>Assistant Surgeon.</i> Government Hospital, Jamshedpur.
6-2-28	R	Sinha, SUBRID CHANDRA, KUMAR, M.SC. 18, Ananda Lane, P.O. Shambazar, Calcutta.
4-1-26	N	Sinton, J. A., O.B.E., LT.-COL., I.M.S., V.C., <i>Officer-in-Charge, Malaria Bureau.</i> Central Research Institute, Kasauli.
5-7-16	L	Sircar, GANAPATI, VIDYARATNA. 69, Beliaghata Main Road, Calcutta.
5-3-24	N	Sircar, THE HON'BLE SIR NRIPENDRA NATH, K.C.S.I., KT., M.A., B.L., <i>Barrister-at-Law, Law Member, H.E. The Viceroy's Executive Council.</i> New Delhi.
5-3-24	R	Sircar, SIR NIL RATAN, KT., M.A., M.D., <i>Physician.</i> 7, Short Street, Calcutta.
7-11-32	N	Sitling, G. T. The Ong Press, Kalimpong, D.H. Ry.
5-8-29	R	Sommerfeld, ALFRED, <i>Merchant.</i> c/o Mousell & Co., Mercantile Buildings, Lall Bazar, Calcutta.
3 9-34	R	Sondhi, VED PALL, M.SC., F.G.S., <i>Assistant Superintendent, Geological Survey of India.</i> 27, Chowringhee, Calcutta.

Date of Election.		
7-3-27	R	Stagg, M., LT.-COL., R.E., O.B.E., <i>Master, H.M.'s Mint</i> , 47, Strand Road, Calcutta.
7-3-23	F	Stamp, L. DUDLEY, B.A., D.SC. University of London, London School of Economics, Houghton Street, London, W.C. 2.
4-1-26	N	Stapleton, GRACE (MISS), M.D., B.S. (LONDON). Dufferin Hospital, Delhi.
28-9-04	L	*Stapleton, HENRY ERNEST, M.A., B.SC., I.E.S., F.A.S.B., <i>Late Director of Public Instruction, Bengal</i> . St. Brelade, Jersey, C.I, England.
5-11-28	N	Statham, R. M., C.I.E., B.A., I.E.S., <i>Educational Commissioner with the Government of India</i> . New Delhi.
6-5-25	R	Staub, MAX, <i>Consul for Switzerland</i> . 100, Clive Street, Calcutta.
1-11-22	A	Strickland-Anderson (Mrs.). 1, Alipur Park, Calcutta.
2-6-20	R	Suhrawardy, SIR HASSAN, O.B.E., LT.-COL., KT., M.D., F.R.C.S.I., D.P.H., <i>Chief Medical Officer, E.B. Ry., late Vice-Chancellor, Calcutta University</i> . 3, Suhrawardy Avenue, Park Circus, Calcutta.
3-3-20	N	Sundararaj, BUNGURU, M.A., PH.D., <i>Director of Fisheries</i> . Chepauk, Madras.
7-11-32	L	Suvarna, SHUMSER JUNG BAHADUR RANA, <i>Major-General in the Nepalese Army</i> . Singha Darbar, Kathmandu, Nepal.
6-4-98	R	Tagore, SIR PRADYOT COOMAR, KT., MAHARAJA BAHADUR. "Tagore Castle", 12, Prasanna Coomar Tagore Street, Calcutta.
7-11-27	R	Tarkatirtha, BIMALANANDA, <i>Kaviraj, Punditbhusan, Byakaranatirtha</i> . 90/3, Grey Street, Calcutta.
31-8-93	L	Tate, GEORGE PASSMAN. 56, Cantonment, Bareilly, U.P.
2-5-32	R	Thakur, AMARESWAR, M.A., PH.D., <i>Lecturer, Calcutta University, Hon. Secretary, Sanskrit Publication Department, Metropolitan Printing and Publishing House</i> . 29, Sadananda Road, P.O. Kalighat, Calcutta.
2-12-29	A	Thomas, H. W., F.C.S., M.P.S., <i>Senior Partner and Chairman of the Managing Directors, Messrs. Smith Stanistreet &amp; Co.</i> Stanistreet House. 18, Convent Road, Entally, Calcutta.
1-6-04	L	*Tipper, GEORGE HOWLETT, M.A., F.G.S., M.INST.M.M., F.A.S.B. "The Laurels", Glebe Road, Cambridge, England.
4-3-29	A	Travers, SIR WALTER LANCELOT, KT., C.I.E., O.B.E., M.L.C., <i>Tea Planter, Baradighi Tea Estate</i> . Baradighi P.O., B.D.R., Jalpaiguri.
7-5-28	F	Tucci, GUISEFFE, PH.D., <i>Late Professor of Religions and Philosophy of India and the Far East, University of Rome; Professor of Chinese, University of Naples</i> . Naples, Italy.
5-7-26	A	Tyson, JOHN DAWSON, O.B.E., M.A. (OXON), I.C.S., J.P., <i>Late Private Secretary to H.E. the Governor of Bengal</i> . Government House, Calcutta.
3-9-34	R	Ulser, M. E. M. M., <i>Consul General for Belgium</i> . 9, Pretoria Street, Calcutta.
6-8-28	N	Urcha, OSWALD, M.D. c/o Messrs. Haverro Trading Co., Ltd., Post Box 642, Bombay.
7-3-27	R	Urquhart, REV. W. S., M.A., D.D., D.LITT., <i>Principal, Scottish Church College, and Late Vice-Chancellor, Calcutta University</i> . 3 & 4, Cornwallis Square, Calcutta.

Date of Election.		
4-7-27	N	Vance, R. L., M.B., B.O.H., B.A.O. (DUB.), L.M. (ROT.), MAJOR, I.M.S., <i>Officiating Chief Medical Officer, Western India States Agency.</i> Rajkot, Kathiawar.
7-8-33	R	Vedantatirtha, VANAMALI, M.A., <i>Formerly Professor, Cotton College, Gauhati.</i> 8/4-E, Nepal Bhattacharya Lane, Kalighat, Calcutta.
6-6-32	R	Vere-Hodge, Mrs. E. H., <i>Author.</i> 9/4, Middleton Row, Calcutta.
5-7-05	R	Vidyabhushan, AMULYA CHARAN. Vangiya Mahakosha, 5, Jadu Mitter Lane (North), Shambazar, Calcutta.
1-2-32	R	Visser, DR. PH. C., <i>Consul-General for the Netherlands.</i> E-1, Clive Buildings, Clive Street, Calcutta.
6-3-01	L	*Vogel, JEAN PHILIPPE, LITT.D., F.A.S.B. Noordeindsplein, 4a, Lieden, Holland.
27-9-94	L	Vost, WILLIAM, LT.-COL., I.M.S. Leicester Lodge, 1, Medina Villas, Hove, Sussex, England.
6-5-25	R	*Wadia, D. N., M.A., B.SC., F.R.G.S., F.A.S.B., <i>Geological Survey of India.</i> 27, Chowringhee, Calcutta.
5-3-28	A	Waight, HARRY GEORGE, B.A. (OXON. and LOND.), F.R.G.S., I.C.S., <i>District and Sessions Judge.</i> Burdwan.
2-5-27	A	Watson, SIR ALFRED HENRY, KT., <i>Late Editor, The "Statesman",</i> Calcutta. England.
2-2-31	A	Wauchope, R. S., O.B.E., A.I.C.E., F.R.A.I., MAJOR, I.A. 8, Park Chambers, 93, Park Street, Calcutta.
6-2-33	N	Wellsted, THOMAS ARTHUR, A.R.S.M., B.SC., ASSOC. INST. M.M., <i>Mining Engineer.</i> Mansar, P.O. Kandri, Ramtek, C.P.
6-2-33	R	West, WILLIAM DIXON, M.A. (CANTAB.), <i>Assistant Superintendent, Geological Survey of India.</i> 27, Chowringhee, Calcutta.
1-11-26	R	Westcott, FOSS, MOST REVEREND, D.D. (CANTAB.), HONORARY D.D. (OXON), <i>Lord Bishop of Calcutta and Metropolitan of India, Burma and Ceylon</i> Bishop's House, 51, Chowringhee, Calcutta.
19-9-06	L	*Whitehead, RICHARD BERTRAM, F.A.S.B., I.C.S. (RETD.). 30, Millington Road, Cambridge, England.
6-5-29	A	Williams, HENRY FRENCH FULFORD, M.A., CLARE COLLEGE (CAMP), <i>Chaplain of Barrackpore.</i> Barrackpore.
6-2-28	F	Williams, T. TALIESIN, M.A., B.SC. 2, Orchard, Welwyn Garden City, Herts, England.
3-2-34	R	Wilson, HARRY ELLIS CHASLER, M.B., CH.B., D.S., <i>Professor of Biochemistry and Nutrition, All-India Institute of Hygiene and Public Health.</i> U.S. Club, Calcutta.
7-3-06	L	*Woolner, ALFRED COOPER, C.I.E., M.A., D.LITT. (Hon.), F.A.S.B., <i>Vice-Chancellor, Punjab University.</i> 53, Lawrence Road, Lahore.
1-4-08	R	Wordsworth, WILLIAM CHRISTOPHER, M.A., I.E.S. (RETD.). c/o The "Statesman", Chowringhee Square, Calcutta.
7-3-27	N	Wright, FREDERIC MAITLAND, <i>Broker.</i> Post Box No. 72, Bombay.
5-2-19	N	*Yazdani, GHULAM, M.A., F.A.S.B., <i>Epigraphist to the Government of India for Persian and Arabic Inscriptions, Hyderabad.</i> Archaeological Survey, Hyderabad, Deccan.

# ORDINARY MEMBERS.

(Chronological.)

1884.			1905.		
Nov.	5.	Middlemiss, C. S.	July	5.	Vidyabhusana, A. C.
1887.			Aug.	2.	McCay, D.
Aug.	25.	Criper, W. R.	1906.		
1888.			Jan.	3.	Chapman, J. A. 30
June	6.	Pennell, A. P.	Mar.	7.	Nahar, P. C.
1889.			"	"	Woolner, A. C.
Mar.	6.	La Touche, T. H. D.	Sept.	19.	Whitehead, R. B.
1890.			Oct.	31.	Finlow, R. S.
5 Mar.	5.	Ray, Sir Prafulla C.	1907.		
1892.			July	3.	Brown, J. C. 35
Jan.	11.	MacLagan, Sir Edward D.	"	"	Christie, W. A. K.
Feb.	1.	Bodding, P. O.	1908.		
1893.			Jan.	1.	Brahmachari, Sir U. N.
Aug.	31.	Tate, G. Passman	April	1.	Wordsworth, W. C.
1894.			Nov.	4.	Bhattacharji, B.
Sept.	27.	Vost, W.	1909.		
1895.			Jan.	6.	Shirreff, A. G. 40
10 Mar.	6.	Bose, Sir Jagadis C.	April	7.	Bentley, C. A.
July	3.	Beatson-Bell, Sir Nicholas D.	July	7.	Bazaz, R. K.
Sept.	19.	De, K. C.	Oct.	6.	Brown, P.
1896.			"	"	Gangoli, O. C.
Jan.	8.	Burn, Sir Richard	Nov.	3.	Christophers, Sir S. R. 45
1897.			1910.		
Dec.	1.	Seth, M. J.	May	4.	Dhavle, S. B.
1898.			"	"	Kemp, S. W.
15 Jan.	5.	Dods, W. K.	Sept.	7.	Gravely, F. H.
April	6.	Tagore, Sir Pradyot C.	1911.		
May	4.	Mookerjee, Sir R. N.	Feb.	1.	Insch, J.
1900.			"	"	Law, N. N. 50
Dec.	5.	Grieve, J. W. A.	Mar.	1.	Mahtab, Sir Bijay Chand
1901.			May	3.	Lomax, C. E.
Mar.	6.	Habib-ur-Rahman.	June	7.	Chatterjee, K. K.
20 " "	"	Vogel, J. P.	"	"	Hosain, M. H.
June	5.	Mann, H. H.	July	5.	Sewell, R. B. S. 55
Dec.	4.	Ross, Sir Edward D.	Nov.	1.	Ahmed, K.
1902.			1912.		
Feb.	5.	Shyam Lal.	May	1.	Harley, A. H.
July	2.	Doxey, F.	June	5.	Misra, C.
1904.			July	3.	Andrews, E. A.
25 June	1.	Tipper, G. H.	Sept.	4.	Ghosh, T. 60
Aug.	3.	Fermor, Sir L. L.	"	"	Singhi, B. S.
"	"	Stapleton, H. E.			

1913.		
Mar.	5.	Simonsen, J. L.
April	2.	Calder, C. C.
June	4.	Majumdar, R. C.
65 Nov.	5.	Fox, C. S.
1914.		
Mar.	4.	Bacot, J.
April	1.	Chaudhuri, G. D.
July	1.	Law, S. C.
Aug.	5.	Law, B. C.
1915.		
70 April	7.	Ohtani, Count K.
Aug.	4.	Gurner, C. W.
Sept.	1.	Cleghorn, M. L. W.
Oct.	27.	Chatterjee, Sir A. C.
1916.		
Feb.	2.	Majumdar, N. K.
75 June	7.	Mahajan, S. P.
July	5.	Sarkar, G.
1917.		
April	4.	Awati, P. R.
"	"	Aiyangar, K. V. R.
Aug.	1.	Bhandarkar, D. R.
1918.		
80 Feb.	6.	Banerji, N. N.
"	"	Manen, Johan van
"	"	Singh, B. M.
April	3.	Prashad, B.
1919.		
Feb.	5.	Yazdani, G.
85 Mar.	5.	Gupta, S. P.
April	2.	Friel, R.
Nov.	5.	Hemraj, R.
1920.		
Mar.	3.	Mahalanobis, P. C.
"	"	Sundara Raj, B.
90 June	2.	Suhrawardy, Sir H.
"	"	Majumdar, N. G.
July	7.	Knowles, R.
Aug.	4.	Dikshit, K. N.
Sept.	1.	Chakladar, H. C.
95 " "	"	Chanda, R. P.
"	"	Chatterjee, N. C.
Dec.	"	Akbar Khan, Sir M.
1921.		
Jan.	5.	Ray, J. N.
Feb.	2.	Jain, Chhote Lal
100 " "	"	Mukerjee, R. P.
"	"	Mookerjee, S. C.
Mar.	2.	Agharkar, S. P.

June	1.	Muzamilullah Khan, Sir Mohammad	
Sept.	7.	Ray, H. C.	
Nov.	2.	Hora, S. L.	105
1922.			
Feb.	1.	Bhattacharya, V. S.	
"	"	Chopra, R. N.	
April	5.	Abdul Ali, A. F. M.	
Sept.	6.	Das-Gupta, S. N.	
Nov.	1.	Strickland-Anderson, Mrs.	110
1923.			
Mar.	7.	Labey, G. T.	
"	"	Stamp, L. D.	
May	2.	Shebbeare, E. O.	
June	6.	Howard, Sir A.	
"	"	Hutton, J. H.	115
Aug.	1.	Biswas, K. P.	
Dec.	5.	Chopra, B. N.	
"	"	Barwell, N. F.	
"	"	Sen, H. H. Lakshman	
"	"	Pande, S. B.	120
1924.			
Feb.	6.	Mahindra, K. C.	
Mar.	5.	Banerjee, P. N.	
"	"	Kanjilal M. N.	
"	"	Mitter, Sir B. L.	
"	"	Mitter, D. N.	125
"	"	McPherson, J.	
"	"	Sircar, Sir N. N.	
"	"	Sircar, Sir N. R.	
April	2.	Bahl, K. N.	
"	"	Ghose, K.	130
"	"	Richards, F. J.	
"	"	Haq, M. M.	
"	"	Mitra, J. C.	
May	7.	Bhattacharya, B.	
July	2.	Ray, A. C.	135
"	"	Mookerjee, S. P.	
Aug.	6.	Chatterji, S. K.	
"	"	Moloney, W. J.	
"	"	Roy-Chowdhury, B. K.	
"	"	Davies, L. M.	140
Nov.	5.	Chattopadhyay, K. P.	
"	"	Sahni, B.	
"	"	Mookerji, B. N.	
Dec.	3.	Das, S. N.	
"	"	Newman, Chas. F.	145
"	"	Pushong, E. S.	
"	"	Rogers, T. E.	
"	"	Basu, J. N.	
"	"	Ghose, S. C.	
"	"	Sarkar, C. K.	150
"	"	Roerich, G. N.	
"	"	Sen, H. K.	
"	"	Khan, R. R.	

## 1925.

	Feb.	4.	Guha, B. S.	
155	Mar.	4.	Benthall, Sir E. C.	
	"	"	Das, A. N.	
	April	1.	Perier, F.	
	"	"	Hobbs, H.	
	"	"	Sen, B. C.	
160	May	6.	Jatia, Sir O. M.	
	"	"	Khanna, V. L.	
	"	"	Koester, Hans	
	"	"	Staub, Max.	
	"	"	Wadia, D. N.	
165	June	3.	Datta, S. K.	
	July	6.	Bose, M. M.	
	Aug.	3.	Pruthi, H. S.	
	Nov.	2.	Acharya, P.	
	"	"	Chattopādhyāya, K. C.	
170	"	"	Crookshank, H.	
	"	"	Kimura, R.	
	"	"	Sharif, M.	

## 1926.

	Jan.	4.	Fleming, Andrew	
	"	"	Shortt, H. E.	
175	"	"	Sinton, J. A.	
	"	"	Stapleton, G. (Miss)	
	Feb.	1.	Rao, Y. R.	
	"	"	Ghuznavi, Sir A. K.	
	"	"	Hingston, H.	
180	"	"	Harris, H. G.	
	"	"	Ghuznavi, A. H.	
	Mar.	1.	McKay, J. W.	
	"	"	Datta, H. N.	
	"	"	Basu, N. K.	
185	"	"	Kramrisch, Stella	
	"	"	Bagnall, J. F.	
	April	5.	Senior-White, R.	
	"	"	Ghose, B. C.	
	"	"	Parker, R. H.	
190	"	"	Bhatia, M. L.	
	"	"	Mitter, K. N.	
	"	"	Jones, T.	
	June	7.	Lemmon, R. D.	
	July	5.	Mukhopadhyaya, P. K.	
195	"	"	Tyson, J. D.	
	"	"	Lyne, H. W.	
	Aug.	2.	Mukherjee, J. N.	
	"	"	Khettry, B.	
	Nov.	1.	Jameson, T. B.	
200	"	"	Modi, J. R. K.	
	"	"	Westcott, F.	
	"	"	Barhut, T. K.	
	"	"	Mills, J. P.	
	"	"	Galstaun, S.	
205	"	"	Chokhani, S.	
	"	"	Bagehi, P. C.	
	Dec.	6.	Aiyangar, S. K.	
	"	"	Guha, S. N.	
	"	"	Roy, A. K.	

## 1927.

	Jan.	3.	Chakravarty, N.	210
	"	"	Bivar, H. G. S.	
	Feb.	7.	Chatterjee, A.	
	"	"	Captain, D. M.	
	Mar.	7.	Hopkinson, A. J.	
	"	"	Urquhart, W. S.	215
	"	"	Bake, A. A.	
	"	"	Stagg, M.	
	"	"	Ghosh, P. N.	
	"	"	Abdul Kadir, A. F. M.	
	"	"	Fukushima, N.	220
	"	"	Wright, F. M.	
	May	2.	Watson, Sir A. H.	
	June	6.	Nandi, Maharaja S. C.	
	"	"	Jain, R.	
	"	"	Sinha, S. P.	225
	July	4.	Chatterjee, P. P.	
	"	"	Chakravarti, C.	
	"	"	Vance, R. L.	
	Nov.	7.	Tarkatirtha, B.	
	"	"	Mukherji, D.	230
	"	"	Brahmachary, S. C.	
	Dec.	5.	Namgyal, H.H. Sir Tashi	
	"	"	Dechhen, H.H. Kun-zang	
	"	"	Chowdhury, Sir C.	
	"	"	Mukerjee, S. K.	235

## 1928.

	Jan.	2.	Basu, N. M	
	"	"	Mello, F. de	
	Feb.	6.	Sinha, S. C.	
	"	"	Ezra, Sir D.	
	"	"	Reneman, Nico	240
	"	"	Mukerji, Sir M. N.	
	"	"	Williams, T. T.	
	"	"	Shumsher, Sir Kaiser	
	Mar.	5.	Waight, H. G.	
	"	"	Gooptu, D. N.	245
	"	"	Neogi, P.	
	"	"	Biswas, C. C.	
	"	"	Eberl, Otto	
	April	2.	Mullick, K. C.	
	"	"	Bhattacharyya, N. C.	250
	"	"	Kumar, K. K.	
	"	"	Chowdhury, Rai J. N.	
	"	"	Harris, L. E.	
	May	7.	Chatterji, K. N.	
	"	"	Chatterjea, Sir N. R.	255
	"	"	Tucci, G.	
	"	"	Murray, E. F. O.	
	"	"	Gupta, J. N.	
	"	"	Ghosal, U. N.	
	"	"	Mallik, S. C.	260
	"	"	Lord Sinha of Raipur	
	"	"	Saha, M. N.	
	June	4.	Bhadra, S. N.	
	"	"	Hobart, R. C.	



265	June	4.	Bhattachali, N. K.
	July	2.	Roerich, N.
	Aug.	6.	Jaitly, P. L.
	"	"	Urohs, O.
	"	"	Ghuznavi, I. S. K.
270	"	"	Heron, A. M.
	Nov.	5.	Olpadvala, E. S.
	"	"	Chopra, G.
	"	"	Statham, R. M.
	"	"	Reinhart, W.
275	"	"	Galstaun, J. C.

1929.	Jan.	7.	Basu, S. C.
	"	"	Ghose, M. C.
	Feb.	4.	Narain, Hirde
	"	"	Jenkins, W. A.
280	Mar.	4.	Travers, Sir W. L.
	"	"	Mitter, H. K.
	"	"	De, J. C.
	"	"	Basu, B. K.
	"	"	Mullick, P. N.
285	April	1.	Ghose, D. P.
	"	"	Rizvi, S. H. H.
	"	"	Sen-Gupta, N. C.
	May	6.	Sharma, S. R.
	"	"	Williams, H. F. F.
290	"	"	Pawsey, C. R.
	July	1.	Dunn, J. A.
	Aug.	5.	Sommerfeld, A.
	Nov.	4.	Singh, J.
	"	"	Cotter, G. de P.
295	"	"	Campbell, G. R.
	"	"	Parry, N. E.
	"	"	Jarvis, R. Y.
	"	"	Edwards, L. B.
	"	"	Siddiqi, M. Z.
300	"	"	Mallya, B. G.
	Dec.	2.	Khan, M. R.
	"	"	Fawcus, L. R.
	"	"	Thomas, H. W.

1930.	Jan.	6.	Jain, N. K.
305	"	"	Haldar, S. K.
	"	"	Basewitz, Count
	"	"	Hamilton, Sir D. M.
	"	"	Martin, M. F. C.
	"	"	Chakraverti, S. C.
310	Feb.	3.	Henderson, A. G.
	"	"	Mahtab, U. C.
	"	"	Korni, M. A.
	"	"	Pettigrew, W.
	"	"	Chakravarti, M. N.
315	Mar.	3.	Mukharji, I. C.
	"	"	Ashton, H. S.
	April	7.	Pessein, J. F.
	May	5.	Dec, Sir P. C. Bhanj
	"	"	Matthias, O. G.
320	"	"	Mallam, G. L.

May	5.	Cooper, G. A. P.	
June	2.	Kenny, D. E. C.	
Nov.	3.	Austin, G. J.	
"	"	Rahman, S. K.	
"	"	Newman, C. D.	325
Dec.	1.	Roy, K. K.	

1931.	Jan.	5.	Shukla, J. P.
	"	"	Chatterji, D.
	"	"	Evans, P.
	Feb.	2.	Wauchope, R. S.
	"	"	Douglas, G. W.
	"	"	Clough, J.
	Mar.	2.	Bose, S. K.
	April	6.	Bhose, J. C.
	"	"	Prasad, S.
	May	4.	Bottomley, J. M.
	June	1.	Lort-Williams, J.
	Aug.	3.	Barua, K. L.

1932.	Feb.	1.	Holme, J. W.
	"	"	Visser, Ph. C.
	Mar.	7.	Hughes, A.
	"	"	Chakraborty, K. B.
	"	"	Darbari, M. D.
	May	2.	Thakur, A.
	"	"	Muhammad, M.
	June	6.	Vere-Hodge, Mrs. E. H.
	Nov.	7.	Suvarna Shumser
	"	"	Driver, D. C.
	"	"	Sitling, G. T.
	Dec.	5.	Dutt, N.
	"	"	Boyle, C. A.
	"	"	Deb, S. K.

1933.	Jan.	2.	George, J.
	"	"	Dutch, R. A.
	"	"	Singh, R. P.
	Feb.	6.	Wellsted, T. A.
	"	"	Ghatak, J. C.
	"	"	West, W. D.
	Mar.	6.	Seal, S. C.
	June	5.	Morris, C. J.
	"	"	Chakravarti, S. K.
	"	"	Rossetti, F. F. L.
	July	3.	Dutt, G. S.
	Aug.	7.	Sinh, Raghubir
	"	"	Vedantatirtha, V.
	Nov.	6.	Kavyatirtha, R. D.
	"	"	Krishnan, M. S.
	"	"	Coulson, A. L.

1934.	Jan.	1.	Ahmad, M. J.
	Feb.	5.	Bates, W. H.
	"	"	Bhuyan, S. K.

	Feb. 5.	Haldar, B. V.		Nov. 5.	Dey, M.	400
	" "	Kirby, W.		Dec. 3.	Burt, B. C.	
	" "	Law, B. C.		" "	Gladstone, J.	
375	" "	Nariman, R. K.		" "	Wilson, H. E. C.	
	" "	Pasricha, C. L.		" "	Brahmachari, P. N.	
	" "	Percival, F. G.		" "	Chatterjee, S. C.	405
	" "	Richter, H.		" "	Kapur, C. L.	
	" "	Sale, H. M.				
380	" "	Selzam, E. von				
	Mar. 5.	Craddock, Sir W. M.		1935.		
	" "	Modi, J. J. J.		Feb. 4.	Cookson, C. A.	
	" "	Singh, H. H. Sir K.		" "	Singh, S.	
	May 7.	Bent, W. A.		" "	Sayeeduddin, M.	
385	" "	Duncan, P. C.		" "	Sarkar, N. R.	410
	June 4.	Chatterji, B. R.		" "	Law, P. C.	
	" "	Daver, N. S.		" "	Lal, R. B.	
	Aug. 6.	Husain, S. A.		" "	Jaffar, S. M.	
	" "	Mullick, M. L.		Mar. 4.	Roy, S. Singh.	
390	" "	Rao, U. S.		" "	Jack, Hon. Justice	
	Sep. 3.	Auden, J. B.		" "	R. E.	415
	" "	Krishnan, K. S.		" "	Groth, E. M.	
	" "	Ledrus, M.		June 3.	Sughania, R. P.	
	" "	Ow-Wachendorf,		Aug. 5.	Shattock, J. S. H.	
		Baron W.		Sep. 30.	Dutt, M. N.	
395	" "	Sondhi, V. P.		" "	Basu, S. K.	420
	" "	Ulser, M. E. M. M.		" "	Mitter, S. K.	
	" "	Couchman, H. J.		" "	Howland, F.	
	Nov. 5.	Gee, E. R.		Nov. 4.	Bor, N. L.	
	" "	Hosain, Prince		" "	Anina Klebe.	
		A. M. M. M. A.		" "	Hirtzel, M. A. F.	425

# LIFE MEMBERS.

(Chronological.)

	5-11-84	C. S. Middlemiss (30 N.).		5- 7-11	R. B. S. Sewell (28 N.).	
	6- 6-88	A. P. Pennell (88 F.).		1-11-11	Kamaluddin Ahmad (24 N.).	
	6- 3-89	T. H. D. La Touche (10 N.).		5- 3-13	J. L. Simonsen 30 (19 N.).	
	11- 1-93	Sir Edward D. MacLagan (94 R.).		4- 3-14	J. Bacot (14 F.).	
5	1- 2-93	P. O. Bodding (14 N.).		5- 8-14	B. C. Law (33 R.).	
	31- 7-93	G. P. Tate (23 N.).		5- 7-16	G. Sircar (29 N.).	
	27- 9-94	W. Vost (94 F.).		6- 2-18	Johan van Manen (25 R.).	
	3- 7-95	Sir Nicholas D. Beatson-Bell (95 N.).		3- 4-18	B. Prashad (29 R.). 35	
	19- 9-95	K. C. De (26 R.).		2-11-21	S. L. Hora (30 N.).	
10	3- 5-98	Sir R. N. Mookerjee (29 R.).		6- 6-23	Sir A. Howard (30 N.).	
	5-12-00	J. W. A. Grieve (00 F.).		5-12-23	H. H. Lakshman Sen (24 N.).	
	6- 2-01	J. Ph. Vogel (25 F.).		7- 5-24	B. Bhattacharya (24 N.).	
	2- 7-02	F. Doxey (28 R.).		6- 8-24	L. M. Davies 40 (24 N.).	
	1- 6-04	G. H. Tipper (27 N.).		3-12-24	G. Roerich (28 F.).	
15	28- 9-04	H. E. Stapleton (26 R.).		6- 6-27	B. D. Jain (28 R.).	
	2- 8-05	D. McCay (29 F.).		5-12-27	Sir Chhajuram Chow- dhury (27 R.).	
	3- 1-06	J. A. Chapman (28 N.).		5-12-27	H. H. Sir Tashi Nam- gyal (27 N.).	
	7- 3-06	A. C. Woolner (28 N.).		5-12-27	H. H. Kunzang Dech- hen (27 N.). 45	
	19- 7-06	R. B. Whitehead (26 N.).		6- 2-28	Sir D. Ezra (28 R.).	
	3- 7-07	J. Coggin Brown (28 N.).		6- 2-28	Sir Kaiser Shumsher Jung Bahadur Rana (28 N.).	
20	3- 7-07	W. A. K. Christie (29 N.).		2- 7-28	N. Roerich (28 F.).	
	1- 1-08	Sir U. N. Brahma- chari (27 R.).		5-11-28	W. Reinhart (28 F.).	
	7- 4-09	C. A. Bentley (30 N.).		4-11-29	G. de P. Cotter (32 N.). 50	
	4- 5-10	S. B. Dhavle (10 N.).		3- 3-30	H. S. Ashton (30 N.).	
25	4- 5-10	S. W. Kemp (29 F.).		5- 1-31	P. Evans (31 N.).	
	1- 2-11	James Insch (28 R.).		7-11-32	Suvarna Shumser Jung Bahadur Rana (32 N.).	
	7- 6-11	M. Hidayat Hosain (27 N.).		6- 2-33	J. C. Ghatak (33 R.).	
				5- 2-34	H. M. Salo (34 N.). 55	
				5- 3-34	H. H. Sir K. Singh (34 N.).	

## SPECIAL ANNIVERSARY HONORARY MEMBERS.

Date of Election	(Science.)
15-1-34	BARON ERNEST RUTHERFORD OF NELSON, O.M., President, Royal Society, London.
15-1-34	PROF. ALBERT EINSTEIN, c/o Princeton University, New Jersey, U.S.A.
15-1-34	M. A. LACROIX, Secrétaire Perpetuel, Académie des Sciences, Paris.
15-1-34	SIR SYDNEY BURRELL, K.C.S.I., F.R.S., Foxhill, Salisbury Road, Farnborough, Hants, England.
15-1-34	DR. SIR SVEN HEDIN, Stockholm, Sweden.

### (Letters.)

15-1-34	SIR JOHN MARSHALL, K.T., c/o Messrs. Grindlay & Co., Ltd., 54, Parliament Street, London.
15-1-34	DR. RABINDRA NATH TAGORE, Santiniketan, Bolpur, Birbhum.
15-1-34	PROF. TAHA HOSAIN, Cairo.
15-1-34	PROF. ARTHUR CHRISTENSEN, 62, Raadhussvej, Charlottenlund, Denmark.
15-1-34	DR. J. VAN KAN, President, Royal Society of Arts and Letters, Batavia, Java.
15-1-34	H.R.H. PRINCE DAMRONG RAJANUBHAB OF SIAM, Siam.

## ASSOCIATE MEMBERS.

Date of Election	
1-2-22	*PIERRE JOHANNES, REV., S.J., B.LITT. (OXON.), <i>Professor of Philosophy</i> , St. Xavier's College, 30, Park Street, Calcutta.
1-2-22	*ANANTAKRISHNA SASTRI, MAHAMAHOPADHYAYA, VEDANTA-VISARADA, <i>Lecturer in Sanskrit</i> , Calcutta University, 32, College Square, Calcutta.
2-5-27	*N. N. VASU, RAI SAHIB, 20, Visvakosh Lane, Baghbazar, Calcutta
2-12-29	†SARAT CHANDRA ROY, RAI BAHADUR, M.A., B.L., <i>Editor</i> , 'Man in India', Church Road, Ranchi.
1-1-34	L. BOGDANOV, Flat 8-B, Solomon Mansions, 7, Royd Street, Calcutta.

\* Re-elected for a further period of five years on 7-3-1932 under Rule 2c.

† Re-elected for a further period of five years on 1-1-1934 under Rule 2c.

## INSTITUTIONAL MEMBERS

Date of Election.	
28-10-29	The Legatum Warnerianum (Oriental Department), University of Leyden, Leyden, Holland
2-12-29	The Adyar Library, Adyar, Madras S
4-5-31	The Benares Hindu University Library, Benares.
1-6-31	The Ohtani University Library, Kyoto, Japan.
5 7-12-31	The Annamalai University Library, Annamalainagar, Chidambaram, S. India.
30-10-33	The Allahabad University Library, Allahabad.
30-4-34	The Bombay University Library, Bombay.

## ORDINARY FELLOWS

Date of Election.	
2-2-10	T. H. D. La Touche, B.A., F.G.S.
2-2-10	Sir Prafulla Chandra Ray, KT., C.I.E., M.A., D.SC.
2-2-10	Sir E. D. Ross, KT., C.I.E., PH.D.
5 7-2-12	Sir J. C. Bose, KT., C.S.I., C.I.E., M.A., D.SC., F.R.S.
5 7-2-12	Sir Samuel R. Christophers, KT., C.I.E., O.B.E., I.M.S., F.R.S.
7-2-12	C. S. Middlemiss, C.I.E., B.A., F.G.S., F.R.S.
5-2-13	J. Ph. Vogel, PH.D., LITT.D.
5-2-13	S. W. Kemp, B.A., D.SC., F.R.S.
3-2-15	G. H. Tipper, M.A., F.G.S., M.INST.M.M.
10 2-2-16	Sir Richard Burn, KT., C.S.I., I.C.S. ( <i>retd.</i> ).
2-2-16	Sir L. L. Fermor, KT., O.B.E., A.R.S.M., D.SC., F.G.S., M.INST.M.M., F.R.S.
7-2-17	F. H. Gravely, D.SC.
6-2-18	J. L. Simonsen, D.SC., F.I.C., F.R.S.
6-2-18	D. McCay, M.D., M.R.C.P., I.M.S.
15 5-2-19	J. Coggin Brown, O.B.E., M.I.M.E., F.G.S.
5-2-19	W. A. K. Christie, B.SC., PH.D., M.INST.M.M.
5-2-19	D. R. Bhandarkar, M.A., PH.D.
5-2-19	R. B. Seymour Sewell, C.I.E., M.A., SC.D., M.R.C.S., L.R.C.P., F.L.S., F.Z.S., F.R.S., I.M.S.
2-2-21	Sir U. N. Brahmachari, KT., M.A., PH.D., M.D., F.S.M.F.
20 1-2-22	Ramaprasad Chanda, B.A.
4-2-25	M. Hidayat Hosain, PH.D.
1-2-26	P. O. Bodding, M.A.
7-2-27	R. Knowles, C.I.E., B.A., M.R.C.S., L.R.C.P., I.M.S.
7-2-27	Johan van Manen, C.I.E.
25 7-2-27	B. Sahni, M.A., SC.D., D.SC., F.G.S.
7-2-27	A. C. Woolner, C.I.E., M.A., D.LITT.
6-2-28	H. E. Stapleton, M.A., B.SC., I.E.S. ( <i>retd.</i> ).
6-2-28	B. Prashad, D.SC., F.Z.S., F.R.S.E.
6-2-28	C. A. Bentley, C.I.E., M.B., D.P.H., D.T.M. & H.
4-2-29	Sir Albert Howard, KT., C.I.E., M.A.
30 4-2-29	J. H. Hutton, C.I.E., M.A., D.SC., I.C.S.
4-2-29	Sir Edward D. MacLagan, K.C.S.I., K.C.I.E.
3-2-30	G. de P. Cotter, B.A., SC.D., M.INST.M.M., F.G.S.
3-2-30	S. L. Hora, D.SC., F.Z.S., F.R.S.E.
35 3-2-30	J. P. Mills, I.C.S., M.A., J.P.

Date of Election		
3-2-30	Meghnad Saha, D.S.C., F.R.S.	
2-2-31	S. Krishnaswami Aiyangar, M.A., PH.D., F.R.HIST.S.	
2-2-31	R. N. Chopra, C.I.E., M.A., M.B., I.M.S.	
2-2-31	R. B. Whitehead, L.C.S. ( <i>retired</i> ).	
1-2-32	J. Bacot.	40
6-2-33	Percy Brown, A.R.C.A.	
6-2-33	Ordhendra Coomarr Gangoly, B.A.	
6-2-33	Ghulam Yazdani, M.A.	
5-2-34	D. N. Wadia, M.A., B.Sc., F.R.G.S.	

## HONORARY FELLOWS

Date of Election		
5-2-96	CHARLES ROCKWELL LANMAN. 9, Farrar Street, Cambridge, Massachusetts, U.S.A.	
2-3-04	SIR GEORGE ABRAHAM GRIERSON, K.C.I.E., O.M., PH.D., D.LITT., LL.D., F.B.A., I.C.S. ( <i>retired</i> ). Rathfarnham, Camberley, Surrey, England.	
6-9-11	KAMAKHYANATH TARKAVAGISA, MAHAMAHOPADHYAYA. 23/1B, Ganen Mitter Lane, P.O. Shambazar, Calcutta.	
5-8-15	SIR JOSEPH JOHN THOMSON, KT., O.M., M.A., SC.D., D.S.C., LL.D., PH.D., F.R.S. Trinity College, Cambridge, England.	
6-12-16	G. A. BOULENGER, F.R.S., LL.D. Jardin Botanique de L'Etat, Brussels.	5
4-2-20	SIR AUREL STEIN, K.C.I.E., PH.D., D.LITT., D.S.C., D.O.L., F.B.A. o/o Indian Institute, Oxford, England.	
4-2-20	A. FOUCHER, D.LITT. Boulevard Raspail 286, Paris, XVI.	
4-2-20	SIR ARTHUR KEITH, M.D., F.R.C.S., LL.D., F.R.S. Royal College of Surgeons of England, Lincoln's Inn Fields, London, W.C. 2.	
4-2-20	R. D. OLDHAM, F.R.S., F.G.S., F.R.G.S. 1, Broomfield Road, Kew, Surrey, England.	
4-2-20	SIR DAVID PRIN, KT., C.M.G., C.I.E., M.A., M.B., LL.D., F.R.S.E., F.L.S., F.R.S., F.Z.S., M.R.I.A. Royal Botanic Gardens, Kew, Surrey, England.	10
4-2-20	SIR JOSEPH LARMOR, KT., M.P., M.A., D.S.C., LL.D., D.O.L., F.R.S., F.R.A.S. St. John's College, Cambridge, England.	
4-2-20	SIR JAMES FRAZER, KT., D.O.L., LL.D., LITT.D. Trinity College, Cambridge.	
4-2-20	J. TAKAKUSU. Imperial University of Tokyo, Tokyo, Japan.	
2-3-21	F. W. THOMAS, C.I.E., M.A., PH.D., <i>Boden Professor of Sanskrit, University of Oxford</i> . 161, Woodstock Road, Oxford, England.	
7-6-22	SIR THOMAS HOLLAND, K.C.S.I., K.C.I.E., D.S.C., F.R.S. <i>Principal</i> , University of Edinburgh, Blackford Brae, Edinburgh.	15
7-6-22	SIR LEONARD ROGERS, KT., C.I.E., M.D., B.S., F.R.C.P., F.R.S., I.M.S. 24, Cavendish Square, London, 4.	
7-1-25	STEN KONOW. Ethnographisk Museum, Oslo, Norway.	
7-3-27	RT. HON'BLE THE EARL OF LYTTON, P.C., G.C.S.I., G.C.I.E. Knebworth, Herts, England.	
4-7-27	C. SNOUCK HURGRONJE. Rapenburg 61, Leiden, Holland.	
5-12-27	LT.-COL. SIR T. WOLSELEY HAIG, K.C.I.E., C.S.I., C.B.E., M.A., C.M.G. 34, Gledstanes Road, West Kensington, London, W. 14.	20

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Date of  
Election.

- 2-12-29 SIR RAJENDRA NATH MOOKERJEE, K.C.I.E., K.C.V.O. 7,  
Harington Street, Calcutta.
- 2-12-29 DR. CHARLES J. H. NICOLLE, *Director*. Pasteur Institute, Tunis.
- 5-5-30 DR. R. ROBINSON, D.SC., F.R.S. The Dyson Perrins Laboratory,  
South Parks Road, Oxford, England.
- 5-5-30 DR. H. JACOBI, C.I.E. (HON.). 59, Niebuhrstrasse, Bonn,  
Germany.

## CHANGES IN MEMBERSHIP.

### LIST OF MEMBERS WHO HAVE BEEN ABSENT FROM INDIA THREE YEARS AND UPWARDS.\*

\* Rule 40.—After the lapse of three years from the date of a member leaving India, if no intimation of his wishes shall, in the interval, have been received by the Society, his name shall be removed from the List of Members.

The following members will be removed from the next Member List of the Society under the operation of the above rule :—

1. Count Bassewitz. (1930.)
2. Andrew Floming. (1926.)
3. R. Friol. (1919.)
4. R. Y. Jarvis. (1929.)
5. Thornton Jones. (1926.)
6. Hans Koester. (1925.)
7. C. E. Lomax. (1911.)

### LOSS OF MEMBERS DURING 1935.

#### BY RETIREMENT.

##### *Ordinary Members.*

1. Syed Khalil Ahmad. (1930.)
2. Sivapada Bhattacharya. (1922.)
3. Nilmani Chakravarti. (1909.)
4. Sir J. C. Coyajee. (1925.)
5. Rev. E. C. Dewick. (1927.)
6. F. B. Fisher. (1929.)
7. H. A. Fooks. (1931.)
8. Miss Gerta Hertz. (1933.)
9. Otto Hubert. (1926.)
10. P. S. Jackson. (1923.)
11. R. B. Khambata. (1926.)
12. M. N. Mitra. (1929.)
13. Bhabadev Mukherjee. (1928.)
14. Aditya Nath Mukherjee. (1926.)
15. Saradindu Mukherjee. (1924.)
16. Karmajogin Ray. (1934.)
17. Sir C. V. Raman. (1922.)
18. Sir D. P. Sarbadhikari. (1909.)
19. A. T. Weston. (1934.)
20. B. C. Hobbs. (1935.)
21. G. F. Berthoud. (1929.)
22. J. F. Snaith. (1926.)
23. N. J. Judah. (1924.)



**BY DEATH.***Ordinary Members.*

1. H. W. Acton. (1921.)
2. A. Ghaffar. (1926.)
3. A. G. Lunan. (1929.)
4. J. N. Maitra. (1918.)
5. L. N. Rai. (1928.)
6. V. N. Vasu. (1934.)
7. F. Williamson. (1934.)
8. Ganesh Prashad. (1935.)
9. P. J. Brühl. (1909.)
10. Narendranath Basu. (1928.)

*Special Anniversary Honorary Member.*

1. Henry Fairfield Osborn. (1934.)

*Honorary Fellows.*

1. H. A. Giles. (1917.)
2. Sylvain Levi. (1920.)

*Associate Member.*

1. H. Hosten, s.j. (1910.)

**UNDER RULE 38.**

1. G. N. Bose Mullik. (1928.)
2. D. L. Clendenin. (1932.)
3. P. K. Das. (1928.)
4. Raja K. Deb. (1925.)
5. M. Eliade. (1931.)
6. G. S. Kewal. (1928.)
7. S. W. Liden La. (1925.)
8. J. J. Mahudavala. (1930.)
9. P. V. Ramanujaswami. (1926.)
10. Suhrid Kumar Roy. (1928.)

## MEDALLISTS.

### ELLIOTT GOLD MEDAL AND CASH.

#### RECIPIENTS.

- 1893 Chandra Kanta Basu.  
 1895 Yati Bhusana Bhaduri.  
 1896 Jnan Saran Chakravarti.  
 1897 Sarasi Lal Sarkar.  
 1901 Sarasi Lal Sarkar.  
 1904 { Sarasi Lal Sarkar.  
       Surendra Nath Maitra.  
 1907 Akshoy Kumar Mazumdar.  
 1911 { Jitendra Nath Rakshit.  
       Jatindra Mohan Datta.  
       Rasik Lal Datta.  
 1913 { Saradakanta Ganguly.  
       Nagendra Chandra Nag.  
       Nilratan Dhar.  
 1918 Bibhutibhusan Dutta.  
 1919 Jnanendra Chandra Ghosh.  
 1922 Abani Bhusan Datta.  
 1923 Bhailal M. Amin.  
 1926 Bidhu Bhusan Ray.  
 1927 Kalipada Biswas.  
 1931 T. C. N. Singh.  
 1932 P. N. Das-Gupta.  
 1933 Nirmal Kumar Sen.  
 1934 D. P. Roy Chowdhury.  
 1935 Kalipada Biswas.

### BARCLAY MEMORIAL MEDAL.

#### RECIPIENTS.

- 1901 E. Ernest Green.  
 1903 Sir Ronald Ross, KT., K.C.B., C.I.E., K.C.M.G., M.R.C.S.,  
       F.R.C.S., D.P.H., LL.D., D.SC., M.D., F.R.S.  
 1905 D. D. Cunningham, C.I.E., F.R.S.  
 1907 A. W. Alcock, C.I.E., M.B., LL.D., F.R.S.  
 1909 Sir David Prain, KT., C.I.E., C.M.G., M.A., M.B., LL.D., F.R.S.E.,  
       F.L.S., F.Z.S., M.R.I.A., F.R.S.  
 1911 Carl Diener.  
 1913 William Glen Liston, C.I.E., M.D., D.P.H.  
 1915 J. S. Gamble, C.I.E., M.A., F.R.S.  
 1917 H. H. Godwin-Austen, F.R.S., F.Z.S., F.R.G.S.  
 1919 N. Annandale, C.I.E., D.SC., C.M.Z.S., F.L.S., F.R.S., F.A.S.B.  
 1921 Sir Leonard Rogers, KT., C.I.E., M.D., B.S., F.R.C.P., F.R.C.S.,  
       F.R.S.  
 1923 Sir Samuel Christophers, KT., C.I.E., O.B.E., F.R.S., F.A.S.B.,  
       M.B., LT.-COL., I.M.S.  
 1925 J. Stephenson, C.I.E., B.SC., M.B., CH.B., F.R.S., F.R.C.S.,  
       F.R.S.E., LT.-COL., I.M.S.  
 1927 S. W. Kemp, B.A., D.SC., F.R.S., F.A.S.B.  
 1929 Sir Albert Howard, KT., C.I.E., M.A., F.A.S.B.

- 1931 R. B. Seymour Sewell, C.I.E., M.A., SC.D. (CANTAB.),  
M.R.C.S., L.R.C.P., F.Z.S., F.L.S., F.A.S.B., F.R.S., LT.-COL.,  
I.M.S.  
1933 R. Row, O.B.E., D.SC.  
1935 B. Sahni, M.A., SC.D. (CANTAB.), D.SC., F.G.S., F.A.S.B.

## SIR WILLIAM JONES MEMORIAL MEDAL.

### RECIPIENTS.

- 1927 Sir Malcolm Watson, KT., LL.D. (HON.), M.D., O.M., D.P.H.  
1928 Sir George A. Grierson, K.C.I.E., O.M., PH.D., D.LITT., LL.D.,  
F.B.A., HON. F.A.S.B., I.C.S. (*retired*).  
1930 Dr. Felix H. D'Herelle.  
1932 Dr. C. Snouck Hurgronje.  
1934 Rai Sir Upendra Nath Brahmachari, Bahadur, KT., M.A.,  
M.D., PH.D., F.S.M.F., F.A.S.B.

## ANNANDALE MEMORIAL MEDAL.

### RECIPIENTS.

- 1927 Fritz Sarasin.  
1930 Dr. Charles Gabriel Seligman, M.D., F.R.C.P., F.R.S.  
1933 Dr. Eugène Dubois

## JOY GOBIND LAW MEMORIAL MEDAL.

### RECIPIENTS.

- 1929 Max Weber.  
1932 Dr. Ernst J. O. Hartert, PH.D.  
1935 Prof. Leo Semenowitch Berg.

## PAUL JOHANNES BRÜHL MEMORIAL MEDAL.

### RECIPIENTS.

- 1931 Rev. Ethelbert Blatter, S.J.  
1934 Isaac Henry Burkill, M.A.

## INDIAN SCIENCE CONGRESS MEDAL, CALCUTTA.

### RECIPIENT.

- 1935 Meghnad Saha, D.SC., F.R.S., F.A.S.B.

# PROCEEDINGS OF THE ORDINARY MONTHLY MEETINGS, 1935.

JANUARY, 1935.

*No Meeting.*

FEBRUARY, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 4th, immediately after the termination of the Annual Meeting.

PRESENT.

L. L. FERMOR, ESQ., O.B.E., A.R.S.M., D.Sc., F.G.S., M.INST.M.M., F.R.S., F.A.S.B., President, in the Chair.

*Members :*

Brahmachari, Sir U. N.  
Brown, Mr. Percy  
Calder, Mr. C. C.  
Chakravarti, Mr. C.  
Chatterjee, Mr. P. P.  
Chatterjee, Dr. S. K.  
Dikshit, Mr. K. N.

Hobbs, Mr. H.  
Holme, Mr. J. W.  
Hora, Dr. S. L.  
Hosain, Dr. M. Hidayat  
Jenkins, Dr. W. A.  
Manen, Mr. Johan van  
Mitter, Sir B. L.

Mukherjee, Dr. J. N.

The minutes of the last meeting were read and confirmed.

The General Secretary announced that the presentations of books, etc., received during the last month, would be exhibited in the next Monthly Meeting.

The following candidates were balloted for for election as Ordinary Members :—

(1) *Lal, Ram Bihari*, M.B., B.S., D.P.H., D.T.M. & H., D.B., Professor of Vital Statistics and Epidemiology, All-India Institute of Hygiene and Public Health, 21, Chittaranjan Avenue, Calcutta.

Proposer : R. N. Chopra.

Seconder : S. L. Hora.

(2) *Hobbs, Bertram Carmichael*, Solicitor, c/o. Sanderson and Morgans, 26, Dalhousie Square, Calcutta.

Proposer : Johan van Manen.

Seconder : Ramaprasad Chanda.

(3) *Law, Parbatty Churn*, 223, Cornwallis Street, Calcutta.

Proposer : Bhabani Churn Law.

Seconder : Johan van Manen.

(4) *Sayeeduddin, Mohammed*, B.Sc., M.A. (Edin.), F.R.M.S., F.F.Sc., Professor of Botany, Osmania University, Hyderabad, Deccan.

Proposer : S. L. Hora.

Seconder : H. S. Pruthi.

(5) *Vijayaraghavacharya, Sir T.*, Diwan Bahadur, K.B.E., Vice-Chairman, Imperial Council of Agricultural Research, Secretariat, New Delhi.

Proposer : S. L. Hora.

Seconder : Johan van Manen.

(6) *Prasad, Ganesh*, M.A., D.Sc., Hardinge Professor of Higher Mathematics, Calcutta University, 2, Samavaya Mansions, Corporation Street, Calcutta.

Proposer : J. N. Mukherjee.

Seconder : L. L. Fermor.

(7) *Jaffar, S. M.*, B.A., Author, Translator to the Judicial Commissioner, North-West Frontier Province, 1508, Khudadad Street, Peshawar City, N.W.-F.P.

Proposer : M. Hidayat Hosain.

Seconder : K. N. Dikshit.

(8) *Cookson, Christopher Arthur*, Assistant, Bombay Co., Ltd., 19, British Indian Street, Calcutta.

Proposer : Johan van Manen.

Seconder : Percy Brown.

(9) *Singh, Jagatjit*, His Highness Maharaja Bahadur, G.C.S.I., G.C.I.E., G.B.E., Colonel Farzand-i-Dilband Rasikhul-i-Itikad, Daulat-i-Inglishia Raja-i-Rajgan, Maharaja of Kapurthala, Kapurthala State, Punjab.

Proposer : Johan van Manen.

Seconder : Sir U. N. Brahmachari.

(10) *Sarkar, Nalini Ranjan*, Mayor of Calcutta, Hindusthan Buildings, Corporation Street, Calcutta.

Proposer : Johan van Manen.

Seconder : Sir U. N. Brahmachari.

(11) *Singh, Sarabjit*, M.A., B.L., P.O. Imphal, Manipur State.

Proposer : S. L. Hora.

Seconder : R. N. Chopra.

The General Secretary reported the following loss of membership, since the previous meeting, by death :—

(7) Rai Bahadur Shiv Ram Kashyap (An Ordinary Fellow, 1933).

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(10) I. M. Puri (An Ordinary Member, 1928).

(11) H. M. Bose (An Ordinary Member, 1925).

(1) Sir D. P. Sarvadhikary (An Ordinary Member, 1909).

(2) P. S. Jackson (An Ordinary Member, 1923).

(3) H. A. Fooks (An Ordinary Member, 1931).

The General Secretary reported that the election of—

(2) B. M. Vyas (Elected on 3-9-34),

has become null and void, under Rule 9.

The General Secretary reported that the following has withdrawn his application for membership, since the previous meeting :—

(1) S. A. Ashgar (Elected on 3-9-34).

The President announced the result of the ballot for the election of Ordinary Members and declared that all candidates had been duly elected.

The President announced that no meeting of the Medical Section had yet been arranged to be held during the current month.



### MARCH, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 4th, at 5.30 P.M.

### PRESENT.

SIR DAVID EZRA, KT., F.Z.S., M.B.O.U., Vice-President, in the Chair.

#### Members :

Bose, Mr. M. M.  
Calder, Mr. C. C.  
Chakravarti, Mr. C.  
Chanda, R. B. R.  
Chatterjee, Mr. P. P.  
Dey, Mr. Mukul  
Driver, Mr. D. C.  
Ghose, Mr. T. P.  
Ghuznavi, Mr. I. S. K.

Hobbs, Mr. Harry  
Hora, Dr. S. L.  
Jain, Mr. C. L.  
Ledrus, Rev. M., S.J.  
Manen, Mr. Johan van  
Prasad, Mr. Sharda  
Rahman, Mr. S. K.  
Rao, Mr. U. S.  
Ray, Dr. H. C.

#### Visitors :

Husain, Mr. S. Wajahat

Sen, Mr. A. B.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of nine presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members :—

(12) *Jack, The Hon'ble Mr. Justice Robert Ernest*, I.C.S., United Service Club, Calcutta.

Proposer : L. L. Fermor.

Seconder : J. Lort-Williams.

(13) *Groth, Edward M.*, American Consul, American Consulate General, 9, Esplanade Mansions, Esplanade, Calcutta.

Proposer : Johan van Manen.

Seconder : L. L. Fermor.

(14) Roy, Saileswar Singh, Landholder, 15, Lansdowne Road, Calcutta.

Proposer : Johan van Manen.

Seconder : Sir U. N. Brahmachari.

The General Secretary reported that there had been no loss of membership since the previous meeting, by death.

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(4) E. C. Dewick (An Ordinary Member, 1927).

The General Secretary reported that the election of—

(1) A. K. Chanda (Elected on 5-11-34).

has become null and void, under Rule 9.

The General Secretary reported that there had been no withdrawals of application, since the previous meeting.

The General Secretary reported the constitution of the various Standing Committees of the Society for the year 1935-36 to be as follows :—

*Finance Committee —*

President	} <i>Ex-officio.</i>
Treasurer	
General Secretary	
Dr. J. N. Mukherjee.	
Dr. A. M. Heron.	

*Library Committee —*

President.	} <i>Ex-officio.</i>
Treasurer.	
General Secretary.	
Philological Secretary	
Jt. Philological Secretary	
Physical Science Secretary	
Biological Science Secretary	
Medical Secretary	
Anthropological Secretary	}
Library Secretary	

*Publication Committee :—*

President.	} <i>Ex-officio.</i>
Treasurer.	
General Secretary.	
Philological Secretary	
Jt. Philological Secretary	
Physical Science Secretary	
Biological Science Secretary	
Medical Secretary	
Anthropological Secretary	}
Library Secretary	

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman announced that no meeting of the Medical Section had been arranged to be held during the current month.

The following communication was made and commented upon :—

1. JOHAN VAN MANEN.—*Recent Advances in the study of Chinese Philosophy.*

The recent issue of the second volume of Forke's elaborate history of Chinese Philosophy makes it opportune to consider the present position of the study of Chinese Philosophy in relation to a comprehensive historical study of the philosophy of all mankind.

An attempt is made to review and assess the available material.

Mr. Van Manen said that history might be compared to map making. The progressive description of historical knowledge was like filling in blank spaces on the map with details of greater and greater precision and growing minuteness. Considered from the point of view of function one might think of the growth of knowledge as akin to the development of communications in a country, or to growing internal specialization and development of nerve centres in the human brain. So modern a book of reference as the latest edition of the *Encyclopædia Britannica* dealt in its article on the history of philosophy only under the headings of Greek Philosophy, Patristic Philosophy, Arabic and Jewish Philosophy and Modern Philosophy. In a brief introductory paragraph to the elaborate article one would find the following sentences :—'To all intents and purposes ancient philosophy is essentially Greek Philosophy. This is not to deny the reality and value of Eastern Philosophy, but it remains true that Western Philosophy from Thales onwards is sufficiently self-contained to warrant separate treatment. There are separate articles dealing with Brahmanism, Buddhism, Indian Philosophy, Arabian Philosophy, Jewish Philosophy, etc.' Baldwin's *Dictionary of Philosophy and Psychology*, which represents a standpoint of about a quarter of a century ago, says under the heading 'History of Philosophy' that the subject 'may, as a whole, be divided into two great portions, that which treats of Oriental Philosophy and that which deals with Occidental or European and American Philosophy'. The article on Oriental Philosophy deals with Egypt, Babylonia-Assyria, Persia, India and China. Up to recently general books on the history of Philosophy dealt with non-European Philosophy as a rule as a negligible quantity. Speaking in very broad generalizations it is only with the publication of Deussen's *History of Philosophy* that Indian Philosophy was incorporated on an equal footing, and acquired in the West citizen rights in the republic of human thought. A. Forke has felt the ambition of achieving for Chinese Philosophy what Deussen had done a few decades ago for Indian Philosophy. In 1927, he published his history of ancient Chinese Philosophy, followed in 1934 by his history of mediæval Chinese Philosophy. A third volume is to complete the work, continuing the history to modern times. The two published volumes cover about a thousand quarto pages. The material contained in them is not chiefly based, as in most of this kind of works hitherto published, on the chance material to be found dealt with in isolated monographs or translations, but goes beyond second-hand sources, dealing systematically with the single subjects on the basis of the original texts. It passes in review in a methodical manner the entire material available in China. Passages quoted in translation in the course of the work are everywhere given in the original in foot-notes.



The speaker then gave a brief sketch of the study of Chinese Philosophy in the West before Forke.

In the *Mélanges posthumes* of Abol Rémusat (Paris, 1843) there is a brief essay of 45 pages on Chinese Philosophy. It opens with a list of names of Western scholars who had studied the subject before, and it enumerates Herdtrich, Carpzov, Bayer, Noël, Leibnitz, Bülfinger, and 'many others'.

He exhibited some older publications, such as Intorcetta's *Confucius, Sinarum Philosophus, sive Scientia Sinensis* (Paris, 1687) and also Marshman's *Works of Confucius containing the original text with translation* (Serampore, 1809), the latter a work of special interest for inhabitants of Calcutta.

He then referred to the more recent works of Von Brandt, do Harlez, Faber, Grube, Wiegner, Suzuki, Wilhelm, Tucci, Zenker, and Hackmann, as well as to some recent Chinese and Japanese Historians of Chinese Philosophy. He showed how in the last 50 years a great mass of material had been published on Chinese religion in which the religious and philosophical aspects had not yet been clearly differentiated.

A great drawback was that the available literature on Chinese philosophy and religion is so extensive and so difficult of access that few scholars can utilize all that has already been published in learned and general periodicals, in the form of academical dissertations, of pamphlets, and of separate chapters in general works.

The first compendious treatment of Chinese Philosophy in the West was perhaps the Chinese part of *Die Philosophie im Fortgange der Weltgeschichte* by Windischmann of which the first of the four volumes (1827) is devoted to China. The work is based on the scanty material available at the time, and is rather wide than deep.

Another interesting treatise is the first part of an *Einleitung in das Verstandniss der Weltgeschichte* by Aug. Gladisch, who drew a parallel between Chinese and Pythagorean thought, Posen, 1845.

Zenker's *Geschichte der Chinesischen Philosophie* was published in two volumes in 1926 and 1927. It is written with enthusiasm and more primarily in the interest of philosophical than philological study. Hackmann's *Chinesische Philosophie* was published in 1927 in one volume. The author is a sinologist by profession and his work is an excellent and well-balanced production though briefer than Forke's compendium and without Chinese quotations.

In English Suzuki's *Brief History of Early Chinese Philosophy*, London, 1914, is a readable, but as the title indicates, a briefer and more fragmentary work.

A similar work in Italian is Tucci's *Storia della Filosofia Cinese Antica*, Bologna, 1922.

The speaker then rapidly sketched the discovery of Taoism and the spread of the Tao Te King in Europe, of which at present some fifty European translations exist, followed by the study of other masters of the Taoistic school, such as Lie Tze and Chuang Tze.

It had to be noted that notwithstanding the many translations and the fact that the Chinese text of the Tao Te King had been printed by five different European scholars since 1842, Western scholarship had not yet produced an adequate critical *variorum* edition of the important work. He also referred to the study of the enigmatic old divination book, the Yi King, of which at present some seven European translations exist.

He concluded with the expression of his opinion that thanks to Forke's great work, Chinese thought had now acquired a lasting place in all future history of the thought of mankind and that the big blank hitherto occurring in the philosophical map of the world with regard to China could never be left empty again.

Mr. H. Hobbs asked for a definition of the word philosophy.

Mr. Van Manen replied that there were almost as many definitions as philosophers. The richer the contents of a concept, the more difficult

to enclose them fully or adequately in words. A Chinese philosopher had said, *our truth is not the truth*. A definition in a well-known dictionary was 'the science of science', also expanded to 'the science of the foundations of knowledge'. James prefers a more human and less scholastic definition and says that philosophy is simply 'man thinking'. The Encyclopædia of Religion and Ethics agrees with this view in using the neat phrase 'rational reflexion upon experience'. If he recollected well, a definition given by Cardinal Mercier was that philosophy is the search of the deepest causes of the most general principles. From other points of view it may be said that philosophy is the study of the connection of existence in all its forms, or the study of principles, generalities, as against facts and particulars, which might be called science. Again, it might be held that philosophy seeks meaning, value, interpretation. Other simple definitions are to call philosophy classification, not only in a superficial but in progressively deeper ways, or mental research of unity or again differently, to call it the art of synthesis or co-ordination.

Mr. *Hobbs* suggested that philosophy aims at finding the exact truth which, seeing that man is necessarily biassed, must be a hopeless ideal. However, the less bias, the nearer the truth.

The following paper was read :—

1. S. WAJAHAT HUSAIN.—*Mahmūd Gāwān*.

Mahmūd Gāwān was one of the most remarkable characters in mediæval Indian History and a scholarly life of him, based on original research, has not been published. The present paper supplies that want. All the sources, except those in the Portuguese language, have been used by the author in this compilation.

The life-history of Mahmūd Gāwān is treated under the following heads in this paper :—

Early life and education. Travels and trading. Arrival in India and rise to the position of Prime Minister in the Deccan. Administrative skill. Military skill. Educational activities. Activities as author and poet. Domestic life. The end.

Dr. H. C. Ray enquired for details concerning the sources utilized by the author. Had any local chronicles been discovered dealing specifically with Gāwān or the dynasty he served and belonging to a contemporary period? He warned against depending too much on Firishṭa whom he has been found sometimes rather unreliable, as he had shown in his *Dynastic History of Northern India*. He requested the author not only to quote his sources in detail but to appraise their value. He further wished for a statement from the author as to how far his paper had added to our previous knowledge of Gāwān.

Mr. R. Chanda suggested that the usefulness of the paper might be enhanced by the addition of an appendix giving a literal and critical translation of Firishṭa's text.

Mr. *Hobbs* remarked that the life-story revealed by the author clearly indicated the outstanding character of Gāwān. A man rising to the position to which Gāwān rose under a potentate of a character as that of his master and in the circumstances of his times must needs be of great human interest.

In reply Mr. *Wajahat Husain* said that Mullā 'Abdul Karīm Hamadānī, a contemporary and friend of Mahmūd Gāwān, has written a work on the life of Gāwān from his birth till his last days. Firishṭa states that he has based his biography of Gāwān chiefly on this contemporary writer, but this source has apparently not survived and no copy of the work can be traced. No other independent contemporary sources are known.

In his paper the speaker had quoted in detail all sources utilized by him, which are practically all 'secondary' ones.

As to a translation of Firishtha's data, there would be a difficulty. There is no completely consolidated section concerning Gāwān in Firishtha. References to him are scattered throughout his work and might be all sought out and brought together, but this was not exactly the aim of the present paper which attempted a connected narrative embodying the dispersed data with any comments that modern scholarship had produced with regard to them. In a way it was true that his paper did not give much that was entirely new but he claimed that it was more detailed and complete than the previous notices of Gāwān hitherto published.

The following exhibits were shown and commented upon :—

1. S. L. HORA.—*An interesting Implement for Mud-fishing from Uttarbhag, Lower Bengal.*

Recently, an article on 'Mud-fishing in Lower Bengal' was published in the *Journal* of the Society. It may be recalled that in the various devices described therein fishes were collected by hand from semi-liquid mud. This method may be practicable in small fisheries, but when bigger areas are drained off for fishing purposes, a circular basket of the usual material and make, about 9½ inches in diameter and 23 inches in total length, is used. One end of the basket is open and the mouth is strengthened by a circular band of broad bamboo-strips. At a distance of about 16 inches from the mouth, there is another band of bamboo-strips, after which the split-bamboo sticks are pulled together and secured by a loop of string. The loop is fastened to the nearest band. In this way, the other end of the basket is closed and made to serve as a handle for manipulating the basket.

The split-bamboo sticks, which run lengthwise, are about half an inch apart so that when the open end is dragged through mud, it passes out through the wide spaces and only the fish are trapped inside the basket. The author is given to understand that it is a very effective implement for mud-fishing and that with its help large quantities of *Jiol Machh* (Live Fish) are captured from marshy areas in Lower Bengal.

Mr. Van Manen enquired whether the size of the mazes of the basket was so calculated that small fish of no economic importance should escape, and what was the average size of the fish caught.

In reply to Mr. Van Manen's enquiry Dr. Hora stated that the implement was not meant for catching small fish, such as Putiya (*Barbus* spp.), but for specimens of about 4 inches to 1 foot in length. The interspaces between the split-bamboo sticks are sufficiently wide to allow small fish to pass out along with mud. *Koi machh* of about 6 inches in length were plentiful at Uttarbhag and these had presumably been collected by an implement of this type.

Mr. I. S. K. Ghuznavi remarked that the use of the appliance was principally to avoid stings of *Jiol Singi mächh* and *Māgur*, etc., when seeking for them in semi-fluid mud where they cannot be caught with a net.

2. SHARADA PRASAD.—*Two Sculptural Fragments from Central India.*

(1) Head of a deity, perhaps Viṣṇu. Probable find-place Sohagpur, site of ruined Chedi temples, South Rewa Baghelkhand. Possibly of the late mediæval period. The elaborate *Kirita* 'crown', the heavy pendant in the elongated ear (the other ear is missing), and the thick lower lip are among the remarkable features conforming to the Gupta style. The half-closed eyes suggest the meditative mood. The tranquil expression of the face is highly impressive.

(2) Head of an equestrian statue. Discovered in a forest 30 miles south-west of Satna. Date c. A.D. 1700. The grotesque but vigorous face presumably represents a Gond Chief. Similar images are known to be worshipped among the Gonds under the name of Bara Deva. An entire specimen is found in the Lal Bihari Memorial Collection, where the Chief rides a horse.



#### APRIL, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 1st, at 5-30 P.M.

#### PRESENT.

L. L. FERMOR, ESQ., O.B.E., A.R.S.M., D.Sc., F.G.S.,  
M.INST.M.M., F.R.S., F.A.S.B., President, in the Chair.

#### Members :

Agharkar, Dr. S. P.  
Brahmachari, Sir C. N.  
Calder, Mr. C. C.  
Chanda, R. B. R.  
Chatterjee, Mr. P. P.  
Dey, Mr. Mukul  
Ezra, Sir David  
Gee, Mr. E. R.  
Ghose, The Hon'ble Mr. Justice  
M. C.

Ghose, Mr. T. P.  
Hobbs, Mr. H.  
Hora, Dr. S. L.  
Hosain, Dr. M. Hidayat  
Jack, The Hon'ble Mr. Justice R. E.  
Manen, Mr. Johan van  
Prashad, Dr. Baini  
Rahman, Mr. S. K.  
Roy, Mr. Singh

#### Visitors :

Bose, Mr. H. K.

Chhabra, Dr. B. Ch.  
Fermor, Mrs.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of five presentations of books, etc., which had been placed on the table for inspection.

The General Secretary announced that there had been no applications for membership, since the previous meeting.

The General Secretary reported the following loss of membership since the previous meeting, by death :—

(1) Dr. Ganesh Prasad (An Ordinary Member, 1935).

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(5) Sivapada Bhattacharyya (An Ordinary Member, 1922).

The General Secretary reported that there had been no lapses of election, since the previous meeting, under Rule 9.

The General Secretary reported that :

(1) Mr. Justice C. O. Remfry (Elected on 3-12-34),

had withdrawn his application, since the previous meeting.

The Chairman announced that no meeting of the Medical Section had been arranged to be held during the current month.

The following exhibit was shown and commented upon :—

1. BAINI PRASHAD.—*Ethnological Specimens from the Naga Hills, Assam.*

During the course of a zoological tour about the end of February of this year in the Naga Hills, Assam, the opportunity was taken to collect a few ethnological specimens of this interesting group of tribes.

There is a strip of irregular hills running down from the Himalayas separating Assam and Bengal from Burma. The River Brahmaputra at the northern end of these broken ranges of hills makes a deep inroad into the hills, and it is in the hills generally known as the Naga Hills and which are situated immediately to the south of the encroaching valley referred to above that the Naga tribes have their present home. Starting from Kohima, the headquarters of the Naga Hills and of the Angami tribe, the tour extended through the Sema area to Mokokchung which may roughly be taken as the junction of the Sema and the Ao tribal areas. *En passant* it may be mentioned that Mokokchung is the Sub-Divisional headquarters and second administrative town of the whole area. From Mokokchung the party travelled through the Ao country to Nakachari railway station in the Sibsagar District and it was during this tour that the collection referred to above was made.

The exhibits consist of samples of dress of both men and women of the three tribes, samples of their *daos* and spears, a few specimens of *dao*-holders and three interesting types of beer-drinking mugs. In addition effigies of human and *mithan* heads collected in the area are also exhibited.

DR. PRASHAD said :—

Opportunity was taken by me and my colleague, Dr. B. N. Chopra during the course of a zoological tour in the Naga Hills last February to collect a few ethnological specimens, which appeared to have some interest for us amateurs, from the three tribes of Nagas through whose territory we travelled.

Before explaining the exhibits it would be useful to give a short account of the country and the people visited by us. Running down from the Himalayas and separating Assam and Bengal from Burma is a fairly broad strip of irregular hills. The River Brahmaputra at the northern end of these broken ranges of hills makes a deep inroad into the hills resulting in a valley, and it is in the hills situated immediately to the south of this encroaching valley and generally known as the Naga Hills that the Naga tribes have their present home. The Naga Hills are directly under the administration of the Government of Assam and are administered as a separate district under a Deputy Commissioner. The administration of this area is unique, in that there is no police, no pleaders or the extra-heavy machinery of administration. The Deputy Commissioner and the Sub-Divisional Officer with the help of a number of *Dobhasis* or interpreters successfully carry on the entire administration of the area.

Starting from Kohima, which is the headquarters of the Naga Hills district and which small town lies between the Manipur railway station on the Assam-Bengal Railways and Manipur town, we travelled through the hills inhabited by the Angami and the Sema Nagas, to Mokokechung which is the second administrative town of the district; Mokokechung also marks the junction of the Sema and the Ao tribal areas. From Mokokechung we travelled through the Ao country to Nakachari railway station in the Sibsagar District, and then entrained back for Calcutta.

It would be presumptuous on my part to claim anything but an amateur's knowledge gained firsthand during this short tour of this interesting group of tribes, the Angami, the Sema and the Ao Nagas, during the three weeks or so which we spent in this part of the country. Detailed accounts of the first two tribes, the Angami and the Sema, have been published by Dr. J. H. Hutton, at present Deputy Commissioner of the Naga Hills and a world-renowned authority on the Nagas, in the series of monographs on the primitive tribes of Assam, while two monographs on the Ao Nagas have been published by Dr. W. C. Smith and Mr. J. P. Mills. These four volumes have been of very great help to me in understanding the social life and customs of the three tribes.

Dr. Hutton originally derived the word 'Naga' from the Sanskrit 'Nag', but later in view of the fact that Ptolmey in the 3rd or 4th Century A.D. and Shihabuddin Tahsh in the 16th Century both speak of Nagas as 'Nanga' or naked, he adopted the Sanskrit word 'Nagna' as the derivative of Naga. He, however, added that as the Assamese call them Naga, he is doubtful if this origin is correct, as he believes that both Ptolmey and Shihabuddin's derivation of Naga from Nanga may be due to their informers knowing Urdu only, thus leading these two authors to jump to the conclusion that 'Naga' is derived from 'Nanga'.

I do not propose to give you any detailed account of the three tribes, but a reference may be made to the fact that in the earlier days before the area came under British administration the Nagas were great head-hunters and relics of this custom are today to be found in the fact that they hang outside their houses heads of any animals which they may have killed in hunting or in chase. As human heads are impossible to obtain these days, these interesting people have taken to making effigies in clay of human heads, one of which is being exhibited today. The poorer folks who are even unable to obtain the heads of *mithans*, make them out of the sternal bones of fowls in which the horns are made of pieces of wood stuck through the sternum.

The dress of these people is very simple and both for males and females consists of a loin cloth which is either worn in the form of a kilt as in the case of the Angamis and women of all the three tribes, or as a flap known as the 'langta' as worn by the males of the Sema and the Ao tribes. There is in addition a larger piece of cloth worn in the form of a 'chaddur' over the shoulders. Samples of these cloths of different types are exhibited. The interesting point about the cloths of different types is the variety

and richness of colour, but unfortunately in the areas under the influence of the Christian missions these richly coloured cloths are being replaced by drab, dark white or khaki.

The Nagas are great beer-drinkers, except in the areas under the influence of Christian missions and have both simple and elaborately worked beer-drinking mugs. *En passant* it may be mentioned that beer is a light, fermented liquid made by the Nagas themselves from rice. Their mugs are usually made out of a thick species of bamboo, which is locally quite plentiful. These vary from a very simple type made only of a peeled internode of bamboo to a highly polished and worked elongated type as made by the Chung tribe. Another interesting type of mug which was obtained at Chonglymsen and which is made of clay in the form of a highly elaborate jar with a perforated top. In addition some of the Nagas use the horn cores of *mithans* as their beer mugs. Almost all of them use thin hollow bamboo sticks for sucking the beer in the same way as the more civilized nations use straws nowadays. Some spears and *Daos* of the Nagas collected in the area are also exhibited.

In conclusion I have to express my very great indebtedness to Dr. J. H. Hutton, Mr. T. C. D. Lambert and their Staff for making all arrangements for my tour. My thanks are also due to my colleague Dr. B. N. Chopra for help in collecting the material exhibited.

Dr. Hora agreed that the Naga Hills constitute a wonderful place for ethnologists. He recalled his visit to the Naga Hills and the Manipur valley in 1920 with the late Dr. N. Annandale. His own experience corroborated the remarks made by Dr. Prashad about the distinctive dress and implements of warfare used by the various Naga tribes. He noticed, however, that the colour patterns and designs on the cloths had changed somewhat during the last 15 years. He praised the chastity of the Naga women and the good quality of the Naga beer.

Mr. Hobbs said :—

The Nagas much resemble the Scots.

Their spear shafts are decorated with human hair or fine cane, woven in different colours and designs. They wear a kilt, and play the pipes.

Forty odd years ago I was shooting in the vicinity of the Naga country. One of the men collapsed. The planter in charge of the party sent for assistance to a Naga village. The chief sent a woman who, after the man had been placed in a basket, carried him up the hill as though he was an infant.

The Nagas are regardful of the morality of their women, and no wise man would interfere with them. A planter friend of mine had an assistant, a splendid physical specimen, tall, blonde and brawny. One evening a party of Nagas was walking in file past this young fellow's bungalow. The women as usual bringing up the rear. One of the girls took him in at a glance. That night she came from her village, ten miles away, to the young man's bungalow. Very wisely he took her to the manager's wife who took care of her. About noon the next day the Nagas took her away. She came the next night and the same thing happened. The third time she did this the Nagas gave her a tremendous thrashing, which brought the Naga love story to an end.

A reference by Dr. Hora to motor cars caused me to recall a story told by Mr. Little, Chief Engineer, P.W.D., Assam. He took the first motor car, a Ford, into the Naga country. The Nagas were profoundly impressed. They looked at it sideways, in front, and from the rear; crawled underneath it; sat inside and on the bonnet. Then held a long pow vow before telling Little: 'It is a very good gharry, very good indeed, but nothing like so good as a steam roller.'

Dr. B. Ch. Chhabra said :—

I would draw attention to the term 'Nāga' as the designation of a tribe as well as of a mountain. The form 'Nānga' also occurs. As

regards its derivation, it is connected with the Sanskrit words *nāga* 'serpent' and *nagna*, 'naked'. Most people prefer the latter explanation, perhaps thinking that it refers to the habit of the people, going about naked or almost naked.

The term *Nānga* can also be a corrupted form of the Sanskrit word *nāga*, as the vernacular words *meñh*, *māñgh* and *bāñh* from Sanskrit *megha*, *māgha* and *bāhu* respectively.

I may point out that Indian History knows of *Nāgas* as ruling dynasties in ancient times. The *Bhāraśivas*, for instance, are also known as the *Nāgas*. In Further India certain royal dynasties trace their origin from a *Nāgi* princess.

In view of these considerations I would ask whether we have not in the present term a relic of a forgotten dynasty called the *nāgas*.

Rai Bahadur *Ramaprasad Chanda* remarked :—

The Sanskrit word *Nagna*, naked, does not only mean those who go naked, but also persons with inferior culture or false religion.

Dr. *Prashad* replied to the various speakers.

Mr. *Hobbs* observed :—

Dr. *Prashad*, in the course of his summing up denied my statement about 'bagpipes'. I would point out that I said 'pipes', because the tone and the irregular musical intervals are, or were, reminiscent of the Scottish pipes.



#### MAY, 1935.

On account of the Royal Jubilee celebrations no Ordinary Monthly Meeting was held.



#### JUNE, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 3rd, at 5-30 P.M.

#### PRESENT.

SIR DAVID EZRA, KT., F.Z.S., Vice-President, in the Chair.

#### Members :

Bent, Mr. W. A.  
Bose, Mr. M. M.  
Chanda, R.B. R.

Chattopadhyaya, Mr. K. P.  
Dey, Mr. Mukul  
Manen, Mr. Johan van  
Singh, Mr. Sarabjit

#### Visitors :

Ambler, Capt. G. M.

Chatterjee, Dr. Marcel

The minutes of the last meeting were read and confirmed.

Before proceeding to the further business of the evening the Chairman drew the attention of the meeting to the very pleasant



fact that in the Honours List published at the occasion of His Majesty's birthday, the name of the President of the Asiatic Society of Bengal was included as the recipient of a Knighthood. He felt that every member of the Society would feel grateful on account of the honour bestowed on Dr. L. L. Fermor and he proposed that the General Secretary should send a telegram of congratulation to Sir Lewis Fermor on behalf of the meeting.

The proposal was accepted by acclamation.

The General Secretary reported receipt of twelve presentations of books, etc., which had been placed on the table for inspection.

The General Secretary announced that the following candidates would be balloted for for election as Ordinary Members :—

(15) *Singhania, Raghunath Prasad*, Vidyabhushan-Visarad, Secretary, Rajasthan Research Society, 27, Baranoshi Ghose Street, Simla, Calcutta.

Proposer : O. C. Gangoly.

Secunder : R. Chanda.

(16) *Sen, Bhupati Mohan*, M.Sc. (Cal.), M.A. (Cantab.), Indian Educational Service, Principal, Presidency College, 20-A, Mayfair, Ballygunge, Calcutta.

Proposer : Sir U. N. Brahmachari.

Secunder : S. L. Hora.

The General Secretary reported the following loss of membership, since the previous meeting, by death :—

(2) H. A. Giles (An Honorary Fellow, 1917).

(3) Rev. H. Hosten, S.J. (An Associate Member, 1910).

(4) Vishwanath Vasu (An Ordinary Member, 1934).

(5) L. N. Rai (An Ordinary Member, 1928).

(6) A. G. Lunan (An Ordinary Member, 1929).

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(6) Saradindu Mukherjee (An Ordinary Member, 1924).

(7) A. N. Mukherjee (An Ordinary Member, 1926).

(8) Rev. F. B. Fisher (An Ordinary Member, 1929).

(9) S. K. Ahmad (An Ordinary Member, 1930).

(10) Bhabadeb Mookerjoa (An Ordinary Member, 1928).

(11) Sir C. V. Raman (An Ordinary Fellow, 1925).

(12) Nilmoni Chakravarti (An Ordinary Member, 1909).

The General Secretary reported that there had been no lapses of election, since the previous meeting, under Rule 9.

The General Secretary reported that there had been no withdrawals of application, since the previous meeting.

In accordance with Rule 38, the General Secretary announced that the names of the following Ordinary Members would be suspended as defaulters within the Society's building for the period of a month to be removed from the Society's registers for

non-payment unless the amount due be paid before the next Ordinary Monthly Meeting :—

G. N. Bose Mullick  
G. S. Kewal  
P. V. Ramanujaswami  
D. L. Clendenin  
Raja K. Deb, Rai Mahasai

Dr. Mircea Eliade  
S. B. S. W. Laden La  
S. K. Roy  
P. K. Das  
J. J. Mahudavala

In accordance with Rule 48(a), the General Secretary reported that the Council, since the last Ordinary Monthly Meeting, had adopted the following Regulations regarding the award of 'Pramatha Nath Bose Memorial Medal'.

#### REGULATIONS REGARDING THE AWARD OF THE PRAMATHA NATH BOSE MEMORIAL MEDAL.

(1) The Medal shall be awarded every three years at the Ordinary Annual Meeting of the Asiatic Society of Bengal in February.

(2) The Medal shall be bestowed on a person who, in the opinion of the Council has made conspicuously important contributions to practical or theoretical Geology with special reference to Asia.

(3) The General Secretary shall at a meeting of the Council preceding the Ordinary Meeting in November place before the meeting the names of at least three Geological Experts and three members of the Society for consideration.

The Council shall then proceed to appoint an Advisory Board of not less than three members selected from the list placed before them provided that the Council, for special reasons, shall be entitled to select persons outside the list. The Advisory Board shall always include two Geological Experts and the General Secretary shall be an ex-officio member of the Board.

(4) The Advisory Board shall be termed 'The Pramatha Nath Bose Memorial Medal Advisory Board'. The Board shall appoint a Chairman from amongst its members who shall have a casting vote (in addition to his own vote) in the event of the number of votes being equally divided.

(5) The General Secretary shall call a meeting of the Advisory Board on the first convenient date subsequent to the first Monday of December, at the same time requesting members to bring with them to the meeting a detailed statement of the work or attainments of such candidates as they may wish to propose. The General Secretary shall also place before the Board for consideration detailed statements of the work or attainments of any other candidate submitted by any Fellow of the Society. The Board shall make such arrangements as may be necessary for the selection of a name to be submitted to the Council at their December meeting.

(6) Notwithstanding anything determined in these Regulations, it shall be within the competence of the Board to abstain from the selection of any name to be submitted for the year and to report accordingly to the Council, in which case, provided the Council concurs, the award for the year shall lapse and shall be postponed to the next following year to be determined in the manner prescribed in the above rules, and, if necessary, deferred again year by year, until an award be made, the period mentioned in Rule 1 in such case to be reckoned from the date of the award.

The following papers were presented :—

1. JOGENDRA CHANDRA GHOSH.—*Ekānamśā and Subhadrā*.

The author has made an attempt in this paper to answer (1) How and when Durgā came to be called Ekānamśā : (2) How she

came to be associated with and worshipped along with Baladeva and Kṛṣṇa ; and (3) How and when her name came to be changed to Subhadrā.

Etymology of the word Ekānamśā. Mention of Ekānamśā in iconography in the Bṛhatsaṃhitā. Varāhamihira's description relating to Ekānamśā in his chapter on Pratimālakṣaṇa.

Criticism of Rai Bahadur Prayag Dayal's identification of Lakṣmaṇa in his account of *Important Sculptures added to the Provincial Museum, Lucknow, during the last Decade*, in the *Journal of the U.P. Historical Society*, Vol. VIII, Part II, 1934.

### Conclusions.

In the absence of the author the paper was taken as read.

### 2. K. P. CHATTOPADHYAY.—*The Caḍak Festival.*

The Caḍak festival is associated with the vernal equinox. The ceremony begins a week before the end of the month of Caitra (March-April) and culminates on the last day of that month, which also marks the close of the year in Bengal. This date is known as the day of the passing of the sun into Aries (Mahāviṣuva saṃkrānti). Actually it comes after the day of the vernal equinox by about three weeks. The name, however, indicates clearly the association with the equinoctial day which once did coincide with this date. The end of the year in Bengal appears in course of time to have lagged behind to this extent. The traditional origin of the festival is that on this date king Vāṇa in order to please Mahādeva, drew blood from his body as an offering and propitiated him by dances (along with friends) which are favoured by him.

Conclusion : The Māṇḍa festival, the Caḍak and Dharma worship are closely connected, identical in many respects and have a common origin. They are all based on a belief in resurrection, or coming to life after death, and are intended to be celebrated annually to secure the return to life of the deceased members of the community.

Mr. Chattopadhyay explained that for his communication to the meeting he would limit himself to two or three salient points without going into details which the paper, when printed, would place before the readers. He would only limit himself to the following remarks.

In a previous paper he had published in the *Journal of the Society* a description of the Māṇḍa festival as it is found in Chota Nagpur. The Caḍak festival, now described, is comparable to the Māṇḍa Celebration. The latter was observed in 1934 during the last week of Caitra in different places in Calcutta and suburbs. In this Caḍak festival the deity worshipped is Śiva, or Mahādeva. The place of worship is generally a temporary thatched hut facing the south. An earthen image of a crocodile with a male child between its jaws is also built on the ground to the east of the hut. The crocodile is associated with the offerings to the Sun. The following special ceremonies are performed by the devotees on different days :—

- (1) swinging over fire,
- (2) falling on thorns,

- (3) jumping on knives,
- (4) piercing the skin, with arrows,
- (5) the marriage of Śiva ; and the fire dance,
- (6) swinging on the Caḍak tree,
- (7) the propitiation of the resuscitated ghosts.

He also wished to give expression to his opinion that the festival was of exceedingly remote origin.

Mr. M. M. Bose remarked :—

The word 'Carak', it appears, is derived from the Sanskrit 'Cakra' or wheel, that is 'wheel of time'. The festival is connected with the end of the old year and the beginning of the new year. A year means a single revolution of the wheel of time and this is celebrated by revolving the 'carak' wheel, and Śiva or Mahākālā—the great God of Time—God of destruction and resurrection, is worshipped in this connection. In several parts of India the year ends with Kārtika Amāvasyā—when the Dipāvalī festival is celebrated and Mahākālī or the great Goddess of Time is worshipped. I doubt very much if these festivals are of non-Aryan origin as suggested by the lecturer. More proofs are necessary before this suggestion can be accepted.

Mr. Van Manen inquired whether the speaker meant to imply that he regarded the ceremony as of aboriginal origin, adapted to Hinduism, or as of ancient Hinduic origin ?

The speaker replied that he considered the origin to be pre-Vedic, but that he regarded the expression Hinduism as an undefined term and so preferred to let the matter remain where it was.

### 3. G. M. AMBLER.—*A Vocabulary of the Mawkhen, Salon, or Sea-Gipsy Language of the Mergui Archipelago.*

An attempt has been made to draw up a vocabulary of the Mawkhen language of sea-gipsies who inhabit the Mergui Archipelago, where the author has collected materials during his visits in 1932-33. The materials prepared by him were collected and tested with the help of two Mawkhens who were members of the crew of the author's vessel.

The Mergui Archipelago, on the coast of Lower Burma, consists of 804 islands varying in size. The Salons (Mawkhens) are a very primitive people who inhabit this archipelago and are gradually dying out. Till now the only records of them have been obtained from the 'civilized' members of the tribe, and very little appears to have been published on this insignificant group of Indonesians and their language.

The vocabulary is a double one: Salon-English, and English-Salon. It contains some 400 words apart from the numerals, the names of relationships and a number of short sentences.

A brief introductory description of the Mergui Archipelago is added.

The speaker invited his audience to accompany him to the coast of Lower Burma, from Tavoy, which lies south of Moulmein, to VICTORIA POINT, the most southerly point of Burma which here meets the north-west frontier of Siam.

In this area are three notable ports of call for regular steamship services :—

**Tavoy** : a port situated, inland, up the Tavoy river from where interior produce is exported.

**Mergui** : a coastal port, headquarters of the Mergui administrative division, noted for its pearl fisheries, tin and general produce.

**Victoria Point** : the most southernly port in Burma, with an aerodrome and airways service.

Along this coast, and in the above area is a group of over 800 islands, from mere rocky pinnacles rising sheer out of the sea, to substantial islands like St. Matthews, which is 16 miles long by 6 miles broad, with a mountain peak 3,000 feet high near the south centre ; Kissaraing Island, 18 miles by 10 miles ; the most fertile island in the Group ; Elphinstone Island, 12 miles by 6 miles.

The majority of the islands are covered with dense, tropical virgin jungle and are uninhabited.

These islands are known as the Mergui Archipelago, and it is in this area that this strange tribe is found, variously called 'Selung', 'Salon', 'Sea-Gipsy', 'Orang Laut', 'Orang Sletar', 'Orang Kayang'. In their own language these people term themselves 'Mawkhen' which, literally translated means the 'Drowned people'.

These Mawkhen live all their lives in boats called by them 'Kabang', of most original construction unlike any type of vessel to which we are accustomed.

A log is hollowed out to form the keel, and the sides are heightened by the addition of palm stems and bamboos, laid horizontally along the gunwale, the whole lashed with jungle fibre and caulked with the nest of the dammer bee worked up with Gurjan oil and rosin, all locally available in the forest. Not a single iron nail is used throughout.

In these Kabangs the Mawkhen roam from island to island, fishing and occasionally hunting deer and pig with the aid of the innumerable pariah dogs that live with them in their boats.

The Mawkhens do not practice agriculture. They eke out their diet of fish and flesh by the addition of roots and herbs of which there is a plentiful supply on the islands.

The Mawkhens do not build houses, except a few who have been induced to settle in Victoria Point, who have rough sheds on stilt, in the tidal flats. For shelter they have mats made of the dunnee palm which they erect on their boats or on shore when necessary.

The Tribal Classification has not yet been definitely settled, though, for the present those people are classified as Austronesians.

The Mawkhen language does not appear to bear affinity to any known language but has a number of words that are evidently borrowed from Malay, Siamese and the Chams of Cambodia.

These people are extremely timid and at a very primitive stage of civilization. They have quite a wealth of folk-lore but no real history. They believe in ghosts, evil spirits and the continuation of life after death on another planet. They have a very hazy haphazard idea of a Supreme Being whom they term Thoida, but appear to have no real form of worship. They stand in great awe of their witch doctors (Micha-Blen) and of the magic spells they are supposed to be able to cast. The speaker stated that he intended shortly to go out again to obtain fuller details of their folk-lore, customs, and language.

After the reading of the papers, the following exhibit was shown and commented upon :—

1. SARABJIT SINGH.—*Tobacco Pipes and other objects from the Naga Hills, Assam.*

At the last meeting of the Society Dr. Baini Prashad exhibited ethnological specimens from the Naga Hills and made some observations on certain tribes of the Nagas and the country inhabited by them. The present exhibitor accompanied Dr. Prashad in his tour to the Naga country with the object of making an ethnological collection and studying the physical anthropology of the people.

The specimens of tobacco pipes exhibited were procured from the Angami, Sema, and Ao tribes. Samples of ear-ornaments of men and women, as well as two interesting types of musical instruments were also exhibited.

Mr. Singh explained his exhibit as follows :—

Most Nagas, whether men or women, are inveterate smokers, and even children start smoking at a fairly early age. A specimen of the plant, the leaves of which are generally used for smoking by the Nagas, was kindly identified by the authorities of the Botanical Survey of India as *Nicotiana tabacum* Linn. The leaves of this plant are prepared for smoking by being half dried in the sun and are thereafter rolled up with the feet into thin bundles. Such crudely prepared tobacco is kept alight by means of a piece of live charcoal placed in the bowl of the pipe. In general two types of smoking are practised by the Nagas : (1) dry smoking, and (2) smoking through water. In the latter case the smoke, before being inhaled, passes through a bowl of water which is attached at the base of the smoking pipe.

The simplest and most common type of dry-smoking pipe consists of a small piece of bamboo cut immediately below a node : this serves as the bowl for the tobacco, while another thin bamboo stem fixed into it at an angle slightly less than a right angle serves as the mouth-piece through which the smoke is inhaled. Amongst the Ao Nagas the mouth-piece stem is often decorated with bindings of cane, sometimes dyed red and woven up into elaborate patterns. The pipes of the Aos and Semas differ both in design and form, but the basic idea is identical.

The eastern Angamis and Semas generally use a pipe in which the smoke, before being inhaled, filters through a bowl of water. The receptacle for the tobacco is carved out of a soft grey stone and this is attached to the vertical bamboo or wooden stem fixed into the water receptacle at the base. The main stem dips into the water, while the side mouth-piece, through which the smoke is inhaled, sticks out just above the water level. The majority of the nicotine content of the smoke as it passes through the water is held back, and the water, therefore, before long becomes quite discoloured and saturated with nicotine. This nicotine water is later taken out and stored in bamboo or gourd phials which are carried by the Nagas tucked in their waist belts. Nagas take sips of this nicotine beverage from time to time while working in the rice fields or marching through the country. *En passant* it may be mentioned that it is one of the most important duties of the housewives to collect nicotine water for their husbands. According to the speaker's personal observation the liquid is never swallowed, but another observer records differently. According to Col. Wood, I.M.S. (*Journal of the Natural History Society, Darjeeling*) 'this nicotine drinking seems to have no deteriorating effect on the system except that it pigments the skin'. The skin of an addict to nicotine drinking, according to Col. Wood, takes on a complexion approaching the colour of a good, old seasoned meersch-  
schaum. In some cases for maturing the nicotine water tobacco ash from the bowl is also added to the water in the bowl, as it is believed that this makes the nicotine water ready for use in a much shorter time.

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman announced that no meeting of the Medical Section had been arranged to be held during the current month.

### JULY, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 1st, at 5-30 P.M.,

### PRESENT.

SIR DAVID EZRA, KT., F.Z.S., Vice-President, in the Chair.

#### Members :

Bogdanov, Mr. L.	Groth, Mr. E. M.
Bose, Mr. M. M.	Heron, Dr. A. M.
Chakladar, Mr. H. C.	Hobbs, Mr. H.
Chakravarti, Mr. C.	Ledrus, Rev. M., S.J.
Chattopadhyay, Mr. K. P.	Manen, Mr. Johan van
Driver, Mr. D. C.	Singh, Mr. S.
	Vidyabhusana, Prof. A. C.

#### Visitors :

Banerjee, Mr. Kalachand	Das Gupta, Mr. C. C.
	Giskra, Baroness

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of six presentations of books, etc., which had been placed on the table for inspection.

The General Secretary reported that there had been no applications for membership, since the previous meeting.

The General Secretary reported that there had been no loss of membership, since the previous meeting, by death.

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

- (13) Mathura Nath Mitra (An Ordinary Member, 1929).
- (14) Sir J. C. Coyajee (An Ordinary Member, 1925).
- (15) R. B. Khambata (An Ordinary Member, 1926).

The General Secretary reported that there had been no lapses of election, since the previous meeting, under Rule 9.

In accordance with Rule 38, the General Secretary announced that the names of the following ten Ordinary Members, who had, since the last meeting, been suspended as defaulters within the Society's building, had now been removed as defaulters from the Society's registers for non-payment of dues :—

G. N. Bose-Mullick  
 G. S. Kewal  
 P. V. Ramanujaswami  
 Raja K. Deb, Rai Mahasai  
 D. L. Clendenin

Mircea Eliade  
 S.B. S. W. Laden La  
 S. K. Roy  
 P. K. Das  
 J. J. Mahudavala

The following papers were presented :—

1. S. N. CHAKRAVARTI.—*Two Inscriptions from Barakar.*

These two inscriptions are found on the right door-jamb of the Gaṇeśa temple in the Begunia group of four temples at Barakar in the Burdwan District. Previous literature. Dates Śaka 1382=A.D. 1461, and Śaka 1768=1846. The author believes that on palæographical grounds Śaka 1468 or 1498 seems to be preferred. Detailed palæographical discussion. Transcription. Translation.

In the absence of the author the paper was taken as read.

2. K. P. CHATTOPADHYAY.—*History of Indian Social Organization.*

If the social organization of India be examined, the first thing that strikes the observer is the peculiar system of endogamy combined with exogamy, running through the whole system, among the vast population of the country. It is also noted at once that the giving of food and drink or acceptance thereof, between different social groups, depends on certain ideas of purity associated with the groups.

Some people, it will be found, are considered very pure ; and food and drink touched by them, or prepared by them, are accepted by all (with a few exceptions). They are the Brahmans proper.

These people in their turn accept water and certain kinds of food from only some of the other social units, called jāti or castes. These other groups are in general served by the Brahmans, as priests, though not by their highest sub-division.

There are other castes from which Brahmans do not accept food or drink but which at the same time are not regarded as very impure, and are entitled to certain social privileges. Finally there are the castes which are considered vile.

In general, it is found that the artisans and traders belong to the group which is considered fairly pure by the Brahmans ; while the lowest group is formed by scavengers, menials, and people who follow such humble occupations as basket-making.

In order to explain, in the scientific sense, how such a system might have risen, we shall have to examine, in detail, the entire social organization. We shall also have to investigate how far the researches of ancient and modern workers in this field have contributed to clarify the issues.



The author therefore examines the various theories concerning the origin of castes and also the factors in caste development, as follows :—

The major conclusions may be briefly summarized as follows :—

- (i) An immigration of one or more cultured peoples, laying stress on household exogamy, and not on paternity, leading to a growth of matrilineal society of different types under different conditions, with anomalous kin marriage.
- (ii) Interaction of matrilineal people from different areas leading to further changes.
- (iii) Immigration of a patrilineal people leading to cross-cousin marriage, along with mother-right but giving an appearance of father-right in case of patrilocal residence ; and elsewhere imparting strongly patrilineal traditions.
- (iv) A final cultural domination by a patriarchal people.

Alliances between different groups, and bitter struggles, appear to have taken place before some kind of equilibrium was reached, and the caste system with its complex structure evolved as a stable form of social organization.

Mr. K. P. Chattopadhyay stated that the paper was too big to be read out in its entirety. He would therefore summarize the arguments and conclusions.

The characteristics of Indian caste had to some extent been noted in the agenda paper. The writer pointed out that the caste system shows two kinds of divisions :—

1. A horizontal stratification finding expression in barriers to (a) marriage, (b) taking food of certain kinds, and (c) accepting water from those at lower levels. Certain occupations are restricted to each of the levels.

2. A vertical division which splits up each horizontal stratum into a number of compartments separated by bars against (a) intermarriage and to some extent (b) interdining. Certain occupations are definitely reserved for certain of these groups.

The early hypothesis put forward by the authors of the Hindu Dharmaśāstras was noted. Next the theories of modern writers like Ibbetson, Nesfield, Risley and Sönart were discussed and criticized. Ibbetson failed to explain how the system grew up. He merely noted the tribal basis of some of the castes in the Punjab, and ascribed the complications of the caste hierarchy to Brahmanic and priestly interference. Nesfield attributed the origin of the caste system to the evolution of the arts. He failed to note that some of the arts and crafts practised in the lower strata of society are quite complicated ; also the order of precedence varies from province to province. Other features of the caste system were not taken into account, or simply ascribed to priestly influence. Risley tried to explain the caste organization by the colour difference and consequent (alleged) enmity between the pre-vedic invaders and the earlier dark-skinned and uncultured people. Risley's conclusions are supported neither by the rules governing intermarriage or intermixture of races as found in the Dharmaśāstras, nor by the physical measurements of ethnic provinces. The instance of a highly developed

pre-vedic culture in India was unknown to him. The author further pointed out that a stream of cultured immigrants, of fair skin and fine features, had penetrated to Nepal and built up the Newar culture, passing through Northern India and mixing with the earlier black-skinned people on the way. Yet caste had not developed. Further, the colour difference was sharper in Africa. Yet the home of caste was India, not Africa.

M. S  nart took into account the different viewpoints of these earlier theorists and also brought to bear on the problem his knowledge of early European social organizations and practices. He suggested that the uniqueness of caste in India was due to the physical isolation of the country, combined with the other factors. Parallel developments had taken place in early Greece and Rome but the social groups had not crystallized into castes. In India, the vastness of the country and the physical isolation of the peninsula, led to a rigid form of society.

S  nart overlooked the existence of a pre-vedic high level of culture ; and the fact that the caste structure, while similar in general nature, varies somewhat peculiarly in the different provinces with regard to purity or impurity of certain groups of castes. The fact that caste was not formed in Nepal or other outlying areas, indicates that physical isolation is not sufficient to lead to caste formation under the conditions noted by S  nart.

Recently Dr. Hutton has put forward the view that the necessary factor for caste segregation is to be found in special magical qualities peculiar to certain social groups as found in the Naga Hills. He has concluded that the fear of *mana* (as he terms it) of one group working harm on, or neutralizing, the *mana* of another group, has been responsible for isolation of castes in India. The author however pointed out, by quoting from the writings of Dr. Hutton himself, that the said social groups in the Naga Hills have no bar on intermarriage or interdining. The bar is with regard to occupation. The facts noted by Dr. Hutton are linked up really with the social unit "the household" and were explained by the author on the basis of household exogamy. The developed forms of exactly similar customs in orthodox Hindu society were noted and it was shown how both groups of facts fit in the same general explanation, which is different from that of Dr. Hutton.

The author then considered the different factors that promote solidarity of social groups or lead to their disruption and isolation in the case of contact of people. After discussion the various factors, (a) economic, (b) religious, (c) social, and (d) political, the author came to the conclusion that the economic rivalry of two or more different sets of cultured immigrants, competing for dominance, and influence with the earliest or earlier comparatively uncultured people, has been the most important factor in the isolation of social groups in India. If the competing group had, each of them, superior knowledge of certain arts and crafts, these would be jealously guarded; intermarriage and interdining among the groups of their friends, the semi-civilized people of mixed descent, would be discouraged (and also abstained from) by the groups themselves in their own interest. If in addition the gods were different, the rules of sexual relations opposed, and the food also varied, the contempt and hatred for each other arising out of economic rivalry would be further intensified and would make social isolation complete. Difference of colour and the vastness of the country would be additional factors promoting it.

When some sort of equilibrium was reached, a survey would be made. To such an observer of ancient times, the important factor in determining social position would be (a) the affiliation to this or that social group of cultured immigrants, and (b) admixture of blood in patrilineal or matrilineal line, with aborigines or immigrants. These questions in fact bulk large in the Hindu *Dharma  stra* in discussions of caste hierarchy.

Further, if one group of immigrants and their friends obtained mastery in one place, and the other group in another, while some kind of

compromise was arrived at in a third area, perhaps in the face of a common enemy, the relative position of the different social groups would vary from one such province to another.

The detailed analysis so far made is in agreement with the theory put forward in this paper. The conclusions regarding immigrations of cultured people and the results of their contact were summarized and were noted in the agenda paper.

Mr. M. M. Bose remarked :—

We are thankful to Mr. Chattopadhyay for taking up such an interesting subject as the history of Indian Social Organization. It is evident from the summary that he has given and from the portions of the paper read out by him that his treatment of the subject has been very ample. It also shows that he is gifted with much power of independent thinking as well as a large fund of imagination. But on such a vast subject there is necessarily much room for difference of opinion. It would not be fair to discuss these differences at this stage. We are eagerly awaiting the publication of his paper and then it will be time to offer any criticisms called for.

### 3. CHARU CHANDRA DAS GUPTA.—*A few types of Sedentary Games from Bihar.*

The author, while on an archæological tour in Bihar and the United Provinces in 1934, collected accounts of different sedentary games. He briefly describes and discusses eight such games not yet noticed by previous investigators. The names of the games are :—

- |                |                           |
|----------------|---------------------------|
| 1. Bāra-guṭi.  | 5. Biś-guṭiyā.            |
| 2. Nāo-guṭiyā. | 6. Bāra-guṭiyā.           |
| 3. Bāghā-guṭi. | 7. Nāo-guṭiyā-baiṭhānekā. |
| 4. Rām-tir.    | 8. Sāt-gharoyā.           |

Mr. Das Gupta briefly described the nature of the eight games.

Dr. A. M. Heron remarked :—It may be asked what interest grown up and learned people can have in studying these simple games played by children or simple people. I would like to draw attention to the excellent analysis of what such games are as found in the great *Encyclopædia of Religion and Ethics*. The matter is so well and so tersely put that the extract bears reading out in full. The writer of the article (E. Sidney Hartland) says :—‘A game is an organised occupation, undertaken by two or more persons, the primary intention of which is not utility but pleasure or pastime by means of the exhibition of the skill or good fortune of the players. It proceeds according to definite rules, and sometimes necessitates special instruments or apparatus. Games may be broadly divided into three classes—games of skill, games of chance, and games of imitation. The rules of games of skill are framed to bring out the various qualities, physical, mental, or moral—strength, agility, quickness of the senses, rapidity of calculation and induction, endurance, patience, and so on—of the players. Games of chance, on the other hand, regard only the luck of the players, and are decided by events, such as the fall of dice, over which they have no control. The rules, therefore, are arbitrary conventions, designed to emphasize coincidences. Many games combine the elements of chance and skill in varying proportions. In games of imitation the rules are prescribed by the actions to be imitated—limited, however, by certain conventions appropriate to the circumstances of the players; and the result is measured by the verisimilitude of the performance as thus limited. Such games involve the germ of

**Drama.** Both in games of chance and in those of skill there is contest. In games of imitation there is often little or none ; and the pleasure sought is attained by co-operation, rhythmic movements, and song.

Games as thus defined are social institutions, owing their origin to the inherent restlessness of human beings and the necessity for constant use and practice in order to promote the development and preservation of their physical, mental, and moral powers. They enter very early into the life of the individual, and are of incalculable value in the training of children for graver pursuits of adult years. To the adult—especially the adult savage—they are little less important ; and from the lowest plane of culture upwards, games either in the form of contest or of rhythmic movement (dances), are among the commonest activities'.

Mr. M. M. Bose said :—

Besides the utility of the games mentioned in the *Encyclopædia of Religion and Ethics* as read out by our learned Chairman, it may be pointed out that they also throw light on the character of the people who play them. They are thus of considerable interest from the Social and Anthropological points of view.

The following communication was made :—

1. JOHAN VAN MANEN.—*The word 常 in the Tao Te King.*

The Tao Te King is perhaps the most subtle Chinese philosophic work. It is small in size, consisting in its various recensions of between about 5300 and 5700 characters. Of these characters 105 account together for nearly 3900 of the total. A careful determination of the value of these 105 characters will furnish the basis for the right understanding of the book.

One of these characters is Ch'ang which occurs 31 times. For this one word even the most qualified translators have used a great number of synonyms.

Julien has : eternal, eternally, constant, constantly, constancy, always, unchangeable and enlightened. Legge has : enduring-and-unchanging, constant, constantly, always, ever, regular-unchanging-rule, in-its-regular-course, invariable, unchanging. Others, such as von Strauss, de Harlez, Parker, Grill, Wilhelm, Wieger, vary similarly or more. The *dii minores* are generally worse.

The question is to find a single European word which fits all passages.

The fundamental conception seems to be 'invariable (in manifestation)'. Constant in English does not quite fit everywhere but its equivalent in Latin might perhaps do. 'Eternal' goes beyond the meaning, amongst others because there is no question of time, but of manner. A German word that has been suggested is 'beharrlich' (von Strauss, Weiss). A Latin equivalent might perhaps be 'jugis'. A Sanskrit equivalent is 'nitya', though the latter term has also been wrongly confused with eternal or permanent in European translations. A very near English concept is 'steady', though this word is too colloquial for application in all passages. The same applies to German 'fest' or Dutch 'vast'. German *stät, stets, beständig*,

approach it. Semasiologically or pictographically the Chinese term is probably equivalent to 'standard', but this English word cannot without strain be used in all contexts. What is necessary is to find a term which is the philosophical and solemn equivalent of the more practical and common 'steady' or 'stable', in other words a single term for 'tranquillus sævis in undis', or for 'constancy throughout fleeting and changing appearances'.

Serene and untroubled may also be thought of.

Mr. *Van Manen* said that the problem of translation was a major subject by itself with an extensive literature. He would not set out the theory of this problem but deal only with the specific instance offered by the *Tao Te King*. The subject was thus narrowed to the fourth degree: translation in general; from the Chinese; from an archaic period, about 500 B.C.; of so distinctive and individualistic a writer as *Lao Tszé*. He would for the moment accept the traditional view of the authorship and date of the *Tao Te King*. Since the first anonymous translation into Latin, presumably by a Jesuit priest, and probably dating from about 1788 (a translation not yet published), about 50 European translators have rendered the complete text. Besides, dictionaries, grammars and anthologies, as well as essays and works on Chinese religion, contain a large number of isolated fragments translated in addition.

The translations are of most unequal value and authority. They may be grouped into four main classes. First those of professional sinologists, some 20 in number. Next, those by serious students of religion or philosophy who had studied this special text *ad hoc*, about 12 in number. Thirdly, translators of previous translations from one European language into another, only a few. Fourthly, those of the amateurs, a most diverse group made up by a few serious and capable enthusiasts or dilettantes in the original good sense of the word but containing artists, cranks, idealists, individualists, intuitionists, occultists, phantasts, sentimentalists, syncretists and theosophists, of every hue and quality.

Amongst all these groups there is a bewildering variety of merit and demerit. Not all sinologists had given consistently good work and not all dilettantes consistently bad work. A case in point is where one single non-sinologist had given the correct rendering against a mistaken one of all 49 others, professionals included. Amongst the professionals the speaker preferred on the whole, as a basis for further study, Stanislas Julien (as a grammarian, not as a philosopher), James Legge (for scholarly honesty, but not for beauty or spirit), Carus (for journalistic flair and handy typographical disposition), Richard Wilhelm (for a spiritedness and generally high level of feeling).

The translations of de Harlez and Wieger he considered as very unequal, free and unreliable in spots, but also containing isolated happy or suggestive renderings. De Groot, great scholar though he was in his own line, has been responsible for some very queer interpretations.

In the second group he found useful matter in von Strauss (many of whose improvements had been lost again by subsequent workers), Grill, Ullar (some brilliant isolated points, but, especially in the German edition, a notable attempt to do justice to the rhythmic structure of the text, neglected by nearly all others), and some others.

In the dilettante group the translation by de Pouvoirville (and its subsequent re-translation into Bulgarian) was something between a bad joke and a tragedy; the one by Mac Innes something of a like nature; the one by Dallago haughty and entirely lacking in perspective of the task. From some of the others here and there something useful—perhaps not so very much, but not unimportant—might be gleaned. Konissi's Russian translation was somewhat of curiosity: 'Tolstoi collated my

translation with those in English, German and French, and settled the text of every chapter'.

The artists represented amongst the translators contributed some lessons in the rendering of the formal beauty of the original.

A future serious study of the Tao Te King, after the termination of the first century of European effort at understanding the book, would no longer be able to dispense with a rigidly philological, as against a purely grammatical study of the text. In Chinese philology there was an almost complete absence of what the Germans call philological 'Vorarbeiten', preliminary studies and investigations, with regard to ancient Taoism. Books like Teichmüller's *Neue Studien zur Geschichte der Begriffe* with regard to Heraclitus, do not exist with regard to Lao Tszé.

The surviving remnants of Heraclitus aggregate to perhaps one-fifth of the extent of the Tao Te King. But what a contrast between the nature of the literature concerning Lao Tszé and that concerning Heraclitus! On the one hand a laborious quest for essentials and precise definition, on the other a profusion of polite amiabilities and ethical platitudes, with here and there some historical fact thrown in. In the one case a dialectical and philosophical treatment, on the other a predominantly grammatical one with moralising added. We had, however, not to overlook what von Strauss, Grill and Dvofack have contributed in this direction. Even von Plaenckner's intuitions went in the right direction, however completely his results have been damned by scholarship. Ethically his contribution has value. Borel has done sentimental and artistic justice to some terms, as Haas, Medhurst and others have done theologically. But a complete critical valuation of all workers would lead too far.

As set forth in the preamble to the communication, about one hundred Chinese words constitute the marrow of the Tao Te King. These have to be studied intensively. As a preliminary we need a work like Jacob's concordance to the Upanishads or Haas' concordance to the Bhagavad Gītā. The speaker had compiled such a concordance for himself. There exists a Chinese one which he had not been able to obtain. (Lao chieh Lao, by Ts'ai T'ing-kan, Shanghai, 1922.) He had solved to his satisfaction the specific meaning of a dozen Chinese words in Lao Tszé's usage which had led him to what he considered new and important conclusions. He did not maintain that a Chinese word in the Tao Te King should be indiscriminately or mechanically compared in all its occurrences. There were at least five distinct levels of use of words in the Tao Te King. First, there is the ordinary meaning of ordinary use. Second, there is the modified meaning when used in a binom. For instance it seemed to him, that the whole elaborate discussion concerning the meaning of the

term 無 爲 finds its very simple solution by understanding the binom

not as non-action but as quiet, restful, reposeful, or even unobtrusive. Third, there is the use of archaisms peculiar to Lao Tszé. Fourth, there are traces of forgotten idioms. Fifth, there is the use in rhythmical utterances which may perhaps prove to be oracular quotations in a language not that of Lao Tszé himself.

Now coming to the immediate subject announced in the title of his communication, the speaker stated that he had drawn up a comparative table of the translation of the word ch'ang (occurring 31 times) in the renderings of some 20 different translators. It had to be noted that

the word occurred in some places in conjunction with the words 久,

長, and 壽, which caused modification in its meaning. He had arrived

at the conclusion that instead of using half a dozen or more different words as the translation of the word ch'ang, one single word should be chosen, as one single conception was intended. This conception was

exactly equivalent to the one expressed by the Sanskrit term *nitya* and, though inelegant, the English word *steady* in its various formal modifications (steadily, steadiness, etc.), or the German word *beharrlich*, might provisionally be chosen to represent it.

He admitted that he would like to find a still more satisfactory English equivalent. What was however of supreme necessity, was to do away with the present fluctuating way of translation, rendering the majority of single Chinese words each by a great number of different European words throughout this brief, though deep and wise, scripture. After a reliable pattern-translation has been evolved, which will necessarily be artificial, stiff and rigid in the first instance, it will be the task of word-artists to convert the rigid frame into a living and flowing organism with the maximum possible conservation of internal terminological relations.

In the work of translation of texts like the *Tao Te King*, four elements have to co-operate to obtain an ideal measure of success:—

1. Sinology, a capacity to deal with the Chinese language as such, and under the special aspects required.
2. Philology, a capacity to deal with a written text in accordance with scholarly methods and canons.
3. Philosophy, a capacity to deal with conceptions and their relations to the words used to express them.
4. Artistry, a capacity to deal with and to transpose artistic form.

As yet no single scholar showing outstanding capacity in *all* four directions has dealt with the *Tao Te King*. Probably—as genius is rare—a combination of talent would be needed for the production of a really first-class translation of the work.

Mr. K. P. Chattopadhyay remarked that from what he had heard it appeared to him that the word *ch'ang* indicates dynamic invariability, not static immutability. The Indian philosophical term *nitya* conveys this exactly. There are inherent difficulties to translation of philosophic terms from the language of one civilization into that of another. Language develops through linking sound symbols (or pictographs) with mental images. Abstract ideas come to be represented by a process of elimination of concrete associations. A word signifying an abstract idea can convey the particular sense in which it is to be taken only in its proper milieu and to those who are familiar with it. To translate it, that is to say, to replace it by another sound (or similar symbol) belonging to a different culture, it is necessary to get hold of a word used in a similar thought environment. Identity of milieu is rare; hence exact translation is very difficult.

There exists another set of symbols which express ideas without such limitations or restrictions to the milieu in which they have developed. The symbols used in the mathematical sciences, and natural sciences in general, are capable of use, by people of different cultures, without the possibility of misunderstanding ideas. A wider use of such symbols is likely to reduce the difficulties in the way of translation of philosophic works.

The Chairman announced that no meeting of the Medical Section had been arranged to be held during the current month.



## AUGUST, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 5th, at 5-30 P.M.

## PRESENT.

SIR LEWIS FERMOR, K.T., O.B.E., D.Sc. (Lond.), A.R.S.M., M.INST.M.M., F.G.S., F.R.S., F.A.S.B., President, in the Chair.

*Members :*

Auden, Mr. J. B.  
Barwell, Lt.-Col. N.  
Bent, Mr. W. A.  
Bogdanov, Mr. L.  
Brahmachari, Sir U. N.  
Brown, Mr. Percy  
Chakravarti, Mr. C.  
Chatterjee, Mr. P. P.  
Chatterjee, Dr. S. C.  
Chattopadhyay, Mr. K. P.  
Coulson, Dr. A. L.  
Driver, Mr. D. C.

Ezra, Sir David  
Fox, Dr. C. S.  
Gee, Mr. E. R.  
George, Mr. J.  
Ghose, Mr. T. P.  
Heron, Dr. A. M.  
Hosain, Dr. M. Hidayat  
Hobbs, Mr. H.  
Hora, Dr. S. L.  
Jameson, Mr. T. B.  
Manen, Mr. Johan van  
West, Mr. W. D.

*Visitors :*

Acharji, Mr. M. N.  
Bagchi, Mr. D.  
Barwell, Mrs.  
Bose, Mr. H. K.  
Das, Mr. K. N.

Fermor, Lady  
Fox, Mrs.  
Gee, Mrs.  
Hunt, Miss S. D.  
Mukerji, Mr. D. D.  
Spencer, Dr. E.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of seven presentations of books, etc., which had been placed on the table for inspection.

The General Secretary drew the attention of those present to the valuable presentation to the Society of a copy of the official German record of the International Policies of the great European Powers from 1871-1914 in 54 volumes together with 9 volumes of summaries and a chronological list of contents. The donor was a member of the Society, Baron Ow-Wachendorf, the local Consul-General for Germany, to whom the Society's grateful thanks had been conveyed.

The following candidate was balloted for for election as an Ordinary Member :—

(17) *Shattock, John Swithun Harvey*, B.A. (Oxon.), I.C.S., Assistant Private Secretary to His Excellency the Governor of Bengal, Government House, Calcutta.

Proposer : A. M. Heron.

Seconder : Johan van Manen.

The General Secretary reported the following loss of membership, since the previous meeting, by death :—

(7) Khan Bahadur Abdul Ghaffar (An Ordinary Member, 1926).



The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(16) B. C. Hobbs (An Ordinary Member, 1935).

(17) A. T. Weston (An Ordinary Member, 1934).

(18) Miss Gerta Hertz (An Ordinary Member, 1933).

The General Secretary reported that there had been no lapses of election, since the previous meeting, under Rule 9.

The General Secretary reported that there had been no withdrawals of applications since the previous meeting.

The Chairman announced the result of the ballot for the election of an Ordinary Member and declared that the candidate had been duly elected.

The Chairman announced that no meeting of the Medical Section had as yet been arranged to be held during the current month.

The Chairman announced that there would be an Ordinary Monthly Meeting in the recess month of September, as usual on the first Monday, the 2nd, of the month.

The following papers were presented :—

1. CHINTAHARAN CHAKRAVARTI.—*The Cult of Kālārkarudra (Cādaka-pūjā)*.

The paper notices the characteristic features of the worship of the Śivaite deity Kālārkarudra who, along with various other little-known deities, is worshipped on the occasion of the Cādaka-pūjā—one of the most important popular festivals of Bengal. Descriptions of these deities as found in different manuals of worship are given and an enquiry is made into the antiquity of these deities, as also of the festivities connected with them, on the basis of references to them in old Indian literature.

Mr. Chintaharan Chakravarti said :—

The festivities and external observances connected with the cult as observed in the month of Caitra (March-April), have already been described by a number of students. The present paper seeks to describe the worship proper, not described as yet, the chief characteristics of which include :—

1. The prominent part taken by non-Brahmins, including members of the lower castes and untouchable communities, in various rituals connected with the cult. It is these people that serve as Sāṅgas, Bālās or Sāiṅs, as they are differently called, and the most interesting piece of their business is the salutation of the deity in various postures to the accompaniment of various tunes of music. It is these people who offer Śivāvali or the sacrifice to the she-jackal in which the service of a Brahmin priest is not required. They also perform the *pāṣṇāna* or *ghāṣṇāna*—the pompous bathing of a plank made of the *vilva* tree and a number of cane-creepers bound together—probably symbolic representations of Śiva and Pārvatī.

2. The worship of deities little known to students of Hindu iconography, like Kālārkarudra—the principal deity ; Nilacandī—his female consort ; Hājarā, Kedāra, Gambhīra and Nīla. The worship of these two last-mentioned deities appears to have given the names *Gambhīrā* and *Nīlapūjā* to the festivities in some parts of the country.

3. The sacrifice of the goat to the principal deity who appears to represent an aspect of Śiva. Ordinarily the sacrifice of the goat to Śiva is prohibited.

As to the antiquity of the feast it may be pointed out that festivities similar to those observed on the occasion of the *Caḍaka-pūjā* are referred to in works like the *Bṛhaddharmapurāṇa* and in extracts which are attributed to the *Līṅgapurāṇa* and the *Brahmaravivarta-Purāṇa*. The principal deity of the cult is described in the *Śaṣṭakarmadīpikā*—a tantric digest by Kṛṣṇa Vidyāvāgīśa. He is mentioned but not described in the *Kālāgnirudropaniṣad*—a minor Upaniṣad. The *Kālarudratāntra*, of which there is a MS. in the Society's Library, refers to the spouse of this deity and she is named *Kālarātri* whose worship is described in many works. The absence of references to the deity or to the festivities in the works of Raghunandana and Govindānanda (15th-16th centuries) might be regarded as an indication of the fact that the cult was not popular among high-caste people, a survey of whose religious rites and practices is contained in those works.

These rites and festivities may be survivals of similar practices of some sect of the Pāsupatas, some of whose views and practices, which were apparently obnoxious, came in for ridicule and condemnation in such old works as Śaṅkara's commentary on the *Brahmasūtras* and in the writings of the Jains like the *Yaśodharacarita* and the *Bharatakaḍvātrīṃśikā*.

Col. Barwell enquired :—

In view of the time of year suggested (April-May), I am wondering whether something I have myself witnessed in Bengal may not be part of the ritual of this cult. What I have often seen in villages—indeed not far from Calcutta itself—is this : a group of five or six patently low caste people move with a leader and a drummer from one particular kind of tree to another of the same sort. Here, on a signal from the leader, they prostrate themselves head towards the tree stem ; some sort of incantations are pronounced and then some branches (i.e. leaves) are pulled off the tree. This having been done and the branches spread on the ground, they are stamped or danced upon by the worshippers. The party then moves off passing any tree not of the same kind, till another is found when the ceremony of worship and dance is repeated. Can this be a ceremony connected with the cult of *Kālārkarudra* ?

Mr. Chakravarti replied :—

The ritual referred to by Col. Barwell forms part of the elaborate festivities consisting of dances, music, mimicry and various kinds of physical torture observed on this occasion. It is known as *Khājurbhāṅgā* (tearing off the leaves of the datepalm tree) in Faridpur in Eastern Bengal. A group of *Bālās* (devotees) march to the tree. The leader of the party prostrates himself before it, walks around it and embraces it a number of times and offers incense to it. Then he climbs it, spreads out the erect leaves, dances on them, tears off the youngest leaf and plucks bunches of fruits, all to the accompaniment of the beating of the drum and the utterance of incantations. The leaf and fruits are then carried to the place of worship and at the end of the worship are distributed among the people who treasure them as they are believed to avert lightning from the houses in which these are stored. A similar practice in some parts of the country is known as 'Phala-bhāṅgā' "or falling upon the branches of prickly plants spread on the ground".

(See : *An alphabetical list of the feasts and holidays of the Hindus and Muhammadans—Imperial Record Department, Calcutta, 1914, p. 14.*)

Mr. Gan Manen said :—

In the June meeting of the Society we had the pleasure of listening to Mr. Chattopadhyay who spoke to us on the *Caḍak* festival in Bengal. The speaker treated the subject from the standpoint of the anthropologist,

describing the ceremonial actions connected with this strange festival. He came to the conclusion that the festival was very old, 'pre-vedic' as he preferred to characterize it. If this conclusion be true the festival and the ceremonial must have a history. In his paper Mr. Chattopadhyay did not deal with this aspect of the subject, but confined himself to a description of present-day practice. Now Mr. Chakravarti has given us a valuable supplement by pointing out that there is a theory connected with the festival, with its own literature, of which he quotes three ritual manuals. Whereas Mr. Chattopadhyay connected himself with the statement that the ceremony is connected with the vernal equinox, Mr. Chakravarti adds that the festival belongs to the cult of a curious triune deity styled Kālārkarudra, i.e., Time, Sun and Storm(?). The two papers complement each other in a most happy manner. It is necessary to have, on the one hand, a correct description of a folkloristic phenomenon as it actually happens, but on the other hand it is equally necessary to attempt to trace the history of such a phenomenon in order to find its rationale. In the non-classical Sanskrit and vernacular literatures many traces are preserved of old cultural traditions which may have greatly changed and perhaps degenerated throughout the course of the ages, and it is to be hoped that in the future many instances will occur of a same happy combination of, first, a careful description on the basis of actual observation of some cultural remnant, and, second, a report on the literary and historical data, placing the observed fact in proper perspective.

Mr. Chakravarti has shown that this Cadak festival consists of two distinct elements of which the one (ceremonial acts) appeals predominantly to the eye, whereas the other (the contents of the spoken word connected with the pūjā) appeals predominantly to the ear. Though the former is more easily appreciated than the latter, the latter is no less important than the former. They represent as it were the inner and outer elements of the entire ceremony. In the first description of the festival the second element was only alluded to, but not described or analyzed. This is one-sidedness, which might easily lead students to wrong conclusions. In the present paper our speaker has supplied the element that was lacking in the previous paper, and the two halves now give a complete picture of the whole, which would not be intelligible if either of the two were lacking. Another point of interest is that Mr. Chakravarti holds that certain general principles, dancing, music, mimicry, and self-torture, are essential to the ceremony, but that the local applications of these vary locally and are therefore accidental.

These two points are important and enter a *caveat*, not only with reference to the premature interpretation of the ceremony discussed this evening, but in analogous cases also.

## 2. M. S. MANI.—*Notes on some Indian Gall-forming Psyllidæ (Homoptera).*

In this paper the galls of several species of Psyllids are redescribed. *Megatrioza vitiensis* (Kirkaldy) is recorded as causing the pustule-like galls on leaves of *Eugenia jambolana* (D.C.). *Megatrioza hirsuta* (Craw.) is recorded as causing galls on different species of *Terminalia*, which were previously believed to be produced by Cynips. A partial key to some gall-forming species of the genus *Pauropsylla* (Rubs.) is given. Brief biological notes are also included in a few cases.

In the absence of the author the paper was taken as read.

After the reading of the papers, the following exhibits were shown and commented upon :—

1. A. L. COULSON.—*The Perpeti Meteorite.*

At 11 P.M. on the 14th May, 1935, a meteoric shower occurred in the vicinity of the villages of Perpeti ( $23^{\circ} 19' 30'' : 91^{\circ} 0' 0''$ ), Bhateswar, and Pilgiri under the jurisdiction of the Chandina police station, and near other villages under the police stations of Kachua and Hajiganj, in the Tippera district of Bengal.

Eleven pieces in all were recovered. The total weight of all specimens is 21,942.57 grams; the largest stone weighs 6,689.85 grams. The specific gravity of the meteorite is 3.554. It is being analyzed by Mr. P. C. Roy.

The meteorite, which has been registered as No. 298, Stone, in the collections of the Geological Survey of India, has been classified provisionally as No. 14, White Chondrite (Cw) in Brezina's terminology. It has a white, rather friable mass with few, chiefly white, chondri. It will be described fully in a forthcoming paper in the *Records* of the Geological Survey of India.

The stones are exhibited with the permission of the Director, Geological Survey of India.

Dr. A. L. Coulson said that meteorites are objects of great scientific interest, not only on account of their rarity but also because of their chemical composition. About four falls of meteorites are recorded annually but, making due allowance for the uninhabited areas of the globe and the vast oceanic areas, it has been stated that the average number of meteorite falls cannot be much less than one per *diem*.

The first mention of the Perpeti meteoric shower was in the Calcutta issue of the Bengali paper *Ananda Bazar Patrika* of the 25th May, 1935, in which it was stated that the fall occurred on the 31st Baisakh (14th May) at 11 P.M. in villages under the jurisdiction of the police stations of Chandina, Kachua and Hajiganj in the Tippera District of Bengal. This notice was brought to the attention of the Geological Survey of India by Mr. P. C. Roy, Assistant Curator, and a letter was immediately issued to the District Magistrate of Tippera requesting him to be so kind as to investigate the report and, if possible, to obtain and to send to the Geological Survey such meteorite specimens as he was able to collect. He was reminded of the orders of the Government of India contained in a circular letter issued in 1925 through the agency of the Geological Survey of India, that all meteorites falling within the confines of British India are the property of the Government of India and should invariably find a resting place in the Geological Section of the Indian Museum, Calcutta.

Mr. E. W. Holland, I.C.S., District Magistrate of Tippera, was successful in obtaining and sending to the Geological Survey of India the eleven specimens of meteorites which you now see exhibited at this meeting. It would appear, however, from the reports forwarded by Mr. Holland, that possibly other meteorites that fell in the Kachua police area, have been collected and kept awaiting instructions to send them to the Indian Museum. All those exhibited to-night were collected from the Chandina police area. It is to be hoped, therefore, that Mr. Holland will be successful in obtaining other specimens.

The total weight of stones recovered from the Chandina police area is almost 22 kg.; the largest stone weighs a little less than 6,700 grams. This total weight is large compared with that of other falls and ranks third of all falls of meteorites recovered in India and in the possession of

the Geological Survey of India. The largest fall is the Merua meteorite totalling almost 71½ kg. for five pieces; next is the Kuttippuram meteorite of almost 38½ kg. The Karkh fall, described by your President, is just exceeded by the Perpeti fall, being a little over 21,700 grams.

The usual light and sound phenomena accompanied the fall. The reports received mention a sound like 'three bombs' and all agree in stating that there was a bright light in the south-west. The direction of movement of the shower appears to have been from the south-west to north-east. The Perpeti shower revives memories of the very interesting Dokachi meteoric shower of 1903 described by your President. In the Perpeti case, however, it is not possible to state with certainty that the largest stones were carried furthest in the direction of the flight of the shower on account of their greater mass and consequent greater momentum. This was very well shown in the Dokachi fall.

One may refer conveniently here to the usual question, did we have one stone entering the earth's atmosphere which was disrupted almost immediately into the constituent stones of the Perpeti meteoric shower of which the specimens in front of you are examples? Or did the constituent stones of the shower enter the earth's atmosphere as separate individuals? There seems little doubt that if, as is most possible, there was one parent stone, then that stone was disrupted almost immediately it entered the earth's atmosphere in its rarefied outer regions. The stones all have thin crusts of apparently the same thickness. There appears to be a total absence of secondary crusts which are derived when the stones are disrupted at a late stage in their passage through the atmosphere and the heat generated by the resistance of the earth's atmosphere to their passage through it at a reduced speed compared with their original planetary velocity, has been insufficient to fuse the fresh surfaces regularly and to the extent of the crust on the older surface.

Another interesting point with regard to the stones of the Perpeti shower is the total absence of anything suggesting what are termed flow lines, the corrugations on the crust formed by air currents met by the stones in their passage through the atmosphere. The shapes of two at least of the stones are worthy of attention, one being similar to a truncated spheroid and the other rather tetrahedral in form. One can easily imagine these stones travelling through the atmosphere with their rounded and apical ends, respectively, pointed generally in the direction of flight.

The eleven specimens represent ten individuals more or less completely covered with crust, the two smallest stones obviously having been broken apart by human agency after their recovery. The largest stone appears to have lost quite an appreciable quantity of its mass through the same agency.

Meteorites are classified generally into two main divisions, stones and irons. The Perpeti meteorite falls into the stone class and is composed mainly of silicate minerals with subordinate metallic minerals. It is a rather friable, white stone on a fresh fracture, containing few chondri. The structure is very well illustrated in the thin sections of the smallest of the stones which may be examined through the microscope here by means of transmitted light. Chondri are those peculiar rounded grains or spherules which have no exact counterparts in igneous rocks.

The chief metallic minerals present are nickel-iron, probably in its various alloys kamacite, t̄enite and plessite, steel-grey by reflected light; troilite, the sulphide of iron, bronze by the same light, which is regarded as being practically the equivalent of pyrrhotite; and magnetite, very black and not so abundant as the troilite and nickel-iron. The chief silicate minerals are olivine, the most abundant; enstatite and clinoenstatite, approximately equal in distribution; and a little plagioclase feldspar. A certain amount of what is probably apatite, the phosphate and fluoride or chloride of lime, also occurs.

The meteorite has been classified as a White Chondrite, Cw, according to Brezina's classification. It will be described by me in a paper to be

published in the *Records* of the Geological Survey of India, in which Mr. P. C. Roy's analysis will be included. It will afterwards be exhibited in the meteorite collections of the Geological Survey of India in the Indian Museum which, it may interest you to learn, rank among the best in the world, being inferior in numbers and material probably only to the British Museum in South Kensington and the Field Museum of Chicago.

The President said that it was always pleasant to welcome visitors from outer space and, therefore, we were grateful to Dr. Coulson for his exhibit of the eleven stones that fell during a recent meteoric shower at Perpeti and adjoining villages. The President had himself many years ago taken an interest in a similar shower of stones in Eastern Bengal, described as the Dokachi meteorite, to which Dr. Coulson has referred. The chief interest of the Dokachi fall was the fact that the stones of greater mass had travelled further along their path than those of smaller mass due, of course, to their greater ability to overcome resistance of the air. This indicated that these fragments were all portions of one meteorite that had broken up after its entry into earth's atmosphere.

Dr. Coulson had fully investigated the same point with reference to the Perpeti meteorite, and although the evidence was not so clear, yet there were indications of a similar distribution, making it probable that this shower of meteorites also had resulted from the break up of a single meteorite.

Mr. W. D. West asked if more than one light was seen?

Dr. Coulson replied that only one light was seen in a south-westerly direction. This would seem to be an additional proof that only one parent meteorite entered the earth's atmosphere and that this was disrupted with emission of heat and light almost immediately into the stones now exhibited. In the cases of other showers, however, more than one light has been recorded.

Mr. H. Hobbs asked what was the size of the largest meteorite known?

Dr. Coulson replied that the largest single specimen preserved in any museum is the 'Ahnighito' iron meteorite from Cape York, Greenland, which was transported by Admiral R. E. Peary to the American Museum of Natural History in New York. Its weight is 33 metric tons. The largest meteorite known is the Hoba iron meteorite of South-West Africa, weighing 60 metric tons, which is still *in situ*. Borings have failed to prove the existence of any large mass in the very large meteor crater near Cañon Diablo in Arizona.

Sir U. N. Brahmachari enquired if the elements in meteorites are the same as those of the earth?

Dr. Coulson replied that the elements are the same, but there is a larger proportion of iron and nickel than in the rocks of the earth's crust. The earth's interior, however, is denser than its exterior and its composition is more akin to that of iron meteorites.

## 2. A. M. HERON.—*An artificial 'natural' Freak from China.*

In a previous meeting of the Society Mr. Van Manen exhibited three large ferruginous concretions, composed of limonite and hæmatite, which had been acquired by him from a Chinese monk. These specimens were said to have come from some unspecified locality in China. Limonite is a common ore of iron, and is formed in meadows and marshes. It seemed likely that these specimens had been formed by the accretion of limonite around some substance which might since have disintegrated or been artificially removed, leaving the hollow shell of limonite.

The interest of the specimens lay in their unusual size, and their hollow core.

The Chinese love such freaks of nature and look upon them as objects of art. In olden times natural freaks had to be reported to the Emperor, and in Chinese literature there are frequent notices concerning such objects.

By mischance one of the three concretions recently fell down and broke into a number of small fragments. Advantage was taken of the circumstance to examine the structure of the material more closely than could be done on the unbroken samples.

Drs. Fox and Coulson and Mr. Gee have examined with me the fragments of this curious object. It appears to be composed of lime, calcium hydrate, with a certain amount of carbonate such as always develops in lime mortar after setting and exposure to the air for some months. It must therefore be artificial, and this is confirmed by the fact that it consists of two or more uneven layers of lime,  $\frac{1}{8}$  to  $\frac{1}{4}$  inch in thickness which are separated by a thin film of fibrous material suggestive of the remains of Chinese paper.

In the middle of one of the layers is a small fragment of carbon with a shining conchoidal fracture, like cannel coal.

It would seem that a layer of liquid lime mortar had been poured over a crude baton-shaped mould, thin paper had been laid on it, and one or more layers again poured on and allowed to set with a rough knobbly surface, no attempt having been made to smooth or finish it off neatly. This intentional lack of finish is difficult to reconcile with the habitual care of the Chinese artificer.

The outer surface has been heavily but unequally impregnated with limonite, hydrated oxide of iron, to a depth of  $\frac{1}{4}$  inch in places, in others a mere film, and this has also spread along the surface of the junction between the outer layer and the one below it. The iron oxide may in part have replaced the lime and part of it has dehydrated to micaceous hæmatite.

Dr. Fox suggests that it may be a filter to purify chalybeate water, the iron removed impregnating and replacing the lime, and also points out that it would soften water in the general manner that Clarke's process does with lime water. There the water is brought to the lime and not the lime water to the hard water as in Clarke's process. It is hoped that some light may be thrown on this puzzling object by exhibiting it to the Society.

Dr. Heron explained the exhibit in terms substantially covered by the paragraph contained in the meeting programme.

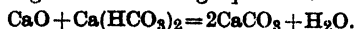
The President recalled that the specimens discussed by Dr. Heron had been exhibited at a previous meeting on the assumption that they were products of nature, and their similarity thereto was so great that they have been accepted as ferruginous concretions by several geologists who had examined the specimens. The accident, therefore in Mr. Van

Manen's household, which had led to one of these specimens being broken, must be regarded as a fortunate one. The purpose of bringing this matter again before the Society was in order to elicit opinion from members concerning the origin of these curious bodies which, it appeared from Dr. Heron's account, must certainly be regarded as of artificial origin. If they had been made deliberately then they were another testimonial to the extraordinary skill of the Chinese in that they had succeeded in producing objects which have been accepted by geologists as natural products.

Dr. E. Spencer remarked :—

With regard to Dr. Fox's suggestion that these hollow concretions may have been used as primitive water softeners, I do not think that this is probable for the following reasons.

The use of lime (CaO) removing temporary hardness from water has to be very carefully regulated. The soluble calcium bicarbonate  $\text{Ca}(\text{HCO}_3)_2$ , which constitutes the temporary hardness of water, may be reduced to insoluble carbonate  $\text{CaCO}_3$  by the addition of one equivalent of lime (CaO) according to the following equation :—



The result is that two equivalents of calcium carbonate are thrown out of solution leaving the water free from temporary hardness.

If, however, an excess of lime CaO is added it goes into solution as alkaline lime hardness which is just as objectionable as the original temporary hardness.

A filter apparatus using a lime container as a filter medium would not be able to control the amount of lime added, and the filtered water would thus be liable to contain at least as much hardness due to excess free lime, as the original temporary bicarbonate hardness.

My view is that if these concretions consist essentially of lime, as stated by Dr. Heron the article has probably been produced accidentally as a bye-product of some manufacturing process, the lime having deposited round a hollow surface.

Before any further pronouncement can be made on the subject it will be necessary to make a detailed chemical analysis of the substance.

[In a subsequent written communication Dr. Spencer added] :—

Since the discussion at the meeting a fragment of the broken 'concretion' handed to me by Dr. Heron has been analysed in Messrs. Bird & Co.'s Research Laboratory with the following interesting results :—

Insolubles	..	..	0.30%
Soluble Silica	..	..	16.61%
Alumina	..	..	5.25%
Ferric Oxide	..	..	2.00%
Lime	..	..	46.90%
Magnesia	..	..	0.95%
Sulphuric Anhydride	..	..	1.15%
Carbon Dioxide	..	..	7.00%
Water, etc.	..	..	18.25%
TOTAL			98.41%

This analysis shows that the concretion has been made from ordinary commercial cement which has been mixed with water and allowed to set in the ordinary way. This fact definitely rules out the possibility of an accidental origin. The article has either been made deliberately as a natural concretion, or it may have represented a primitive form of water container, or may perhaps have constituted the interior lining of a metal or some other container. The small black particles occluded in the cement, to which Dr. Heron drew my attention, have been found on chemical examination to consist of ordinary bituminous coal.



Mr. Van Manen said that he regarded Dr. Spencer's suggestion, that the objects might be accidental bye-products of some manufacturing process, a most valuable one. He recalled that amongst the Tibetans and Chinese freaks of nature were much appreciated and admired on the principle of *omne ignotum pro magnifico*. As amongst these people knowledge of natural history was often very scanty, they could often not distinguish between bizarre natural and artificial forms. The Tibetans styled natural freaks *rang hbyung*, that is: self-originated or naturally produced. He had been offered many pieces of stone, crystals, horns or bones of animals, pieces of decayed wood, and similar objects, which, simply on account of their unusual shape, were thought much of by their possessors. A Tibetan once suggested to him that an ordinary glass paper-weight ball with vivid flower- or flame-shaped colours cast inside would be counted as a most valuable rarity in Tibet, under the impression that it was a natural freak. He thought that Dr. Spencer's suggestion was plausible for this reason that it is not likely that the artificial objects had been purposely manufactured as artificial freaks. If that had been the case, such manufacture would certainly not be an isolated instance, and other specimens would be floating about. In this case, neither his Chinese, nor his Tibetan friends, nor any European collector had met similar objects; so they could not be very common. It might be very well that some observant Chinaman or Tibetan had picked up the things from a rubbish heap near some mine or iron or cement works as marvels of nature.

### 3. JOHAN VAN MANEN.—*A Babylonian clay Tablet with cuneiform Inscriptions.*

Mr. Van Manen said that his communication was not intended to give information but to seek it. India had, like other countries, its special advantages in the matter of material for scholarly study. In all Indological matters its collections and resources were rich. In some other directions its material and resources were poor; for instance with reference to Egyptological or Babylonian studies, experts and reference works.

Recently his assistance had been sought to determine the contents of an inscription on a small clay tablet presumably brought from Mesopotamia. The owner possesses half a dozen similar ones but can give no precise information concerning their provenance. They are probably war relics. The little brick was now placed before the meeting in the hope that some one amongst those present might either be able to give information concerning it, or help in putting the Society in touch with some local scholar able to do so. If no solution could be arrived at in the meeting, perhaps publication of the request in the Advance Proceedings might lead to it.

The tablet was handed round.

### 4. W. D. WEST.—*Cinematograph film of Quetta after the earthquake.*

A short film showing the destruction wrought by the earthquake in various parts of Quetta and at Mastung. Of particular interest are new earthquake-proof bungalows built by the N.W. Ry. since the last earthquake, and quite undamaged by the present earthquake.

It was decided to hold over this exhibit till the next Ordinary Monthly Meeting to be held on MONDAY, THE 2ND SEPTEMBER.



## SEPTEMBER, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 2nd, at 5-30 P.M.

## PRESENT.

SIR LEWIS FERMOR, K.T., O.B.E., D.Sc. (Lond.), A.R.S.M., M.INST.M.M., F.G.S., F.R.S., F.A.S.B., President, in the Chair.

*Members :*

Auden, Mr. J. B.	Ghosh, Mr. P. N.
Biswas, Mr. K.	Groth, Mr. E. M.
Bogdanov, Mr. L.	Heron, Dr. A. M.
Brahmachari, Dr. P. N.	Hora, Dr. S. L.
Brown, Mr. Percy	Hosain, Dr. M. H.
Chakravarti, Prof. C.	Lal, Dr. R. B.
Chatterji, Mr. P. P.	Manen, Mr. Johan van
Coulson, Dr. A. L.	Mitter, Hon'ble Sir B. L.
Ezra, Sir David	Olpadvala, Mr. E. S.
Fox, Dr. C. S.	Prashad, Dr. B.
Gee, Mr. E. R.	Sondhi, Mr. V. P.
Ghose, Mr. T. P.	Spencer, Dr. E.
	West, Mr. W. D.

*Visitors :*

Bagchi, Mr. D.	Fermor, Lady
Bhattacharji, Mr. D.	Fox, Mrs.
Ezra, Lady	Hunt, Mr. H. C.
	Mitter, Lady

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of eight presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for for election as Ordinary Members :—

(18) *Chakrabarti, Sukumar*, B.Sc. and B.A. (Calcutta), D.Litt. (Paris), Barrister-at-Law, Member of the Société Asiatique de Paris, P. 139, Russa Road, Calcutta.

Proposer : Johan van Manen.

Seconder : Sir Lewis Fermor.

(19) *Faruqi, A. J.*, M.Sc. (Alld.), Ph.D. (London), D.I.C., Lecturer, Zoology Department, Muslim University, Aligarh, U.P.

Proposer : S. L. Hora.

Seconder : M. Hidayat Hosain.

(20) *Howland, Felix*, Professor of English, Habibia College, Kabul, Afghanistan.

Proposer : Jamal-ud-Din Ahmad.

Seconder : W. D. West.

The General Secretary reported that there had been no loss of membership, since the previous meeting, by death.

The General Secretary reported that there had been no loss of membership, since the previous meeting, by resignation.

The General Secretary reported that there had been no lapses of election, since the previous meeting, under Rule 9.

The General Secretary reported that there had been no withdrawals of application, since the previous meeting.

Papers were presented, and Exhibits were shown and commented upon, as detailed below.

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman announced that no meeting of the Medical Section had as yet been arranged to be held during the current month.

The Chairman announced that unless special notice was given there would not be any Monthly Meeting during the recess month of October, 1935.

The following paper was presented :—

1. JATINDRA MOHAN DATTA.—*A new type of Bagh-Bandi or Tiger-play prevalent at Basirhat in Lower Bengal.*

A short note describing a variant of a previously published type of sedentary game, *Bagh-Bandi*, a hybrid between *Mughal-Pathān* and *Bagh-Bandi*. Locality, Basirhat, District of 24-Parganas. Dying out.

In the absence of the author the paper was taken as read.

The following exhibits were shown and commented upon :—

1. SIR L. L. FERMOR.—*Tubular Panjal Trap from Kashmir.*

In Kashmir there occurs a thick succession of basic volcanic rocks known as the Panjal traps which have been studied by a succession of geologists, namely Lydekker, McMahon, Middlemiss, Bion, and Wadia. These rocks are generally regarded as surface lava flows probably of terrestrial origin, but possibly submarine. They are of basic—basaltic—composition, though one observer (Wadia) has, by using the term 'augite-andesite', suggested a tendency to an intermediate composition.

These lavas are several thousand feet thick and in age range from Upper Carboniferous to Middle Trias.

Although holding the view that these rocks are true surface lavas of the age indicated by their position, Middlemiss, in his usual philosophical manner, has discussed the possibility that they might be intrusive and even of Deccan trap age, this possibility being suggested by the wide range in age of the rocks with which these traps are associated.

No geologist has yet given any careful description of the macroscopic features of these lavas putting beyond question their almost certain surface origin.

Last autumn I visited Kashmir, and under Mr. Wadia's guidance was shown some of the most important features of Kashmir geology. One of our excursions was to Shukar-ud-din hill near Botiung village on west side of Wular lake. Here Mr. Wadia showed me a fine section of the Panjal traps exposed in a canal cutting. The sheets of lava are dipping to the E.N.E. at about  $45^\circ$ , and consequently in a small distance several successive sheets are crossed making it easy to study the nature of the junctions between these sheets. In thickness the flows in this section vary from, say, 6 feet to between 50 and 100 feet. The upper portion of each flow is vesicular and amygdular and a small thickness at the base is usually amygdular, whilst the interiors of the flows are on the whole non-vesicular, though there are often scattered vesicles and sometimes lines thereof.

The most interesting discovery, however, was that in no less than three of the flows there are tubular vesicles at the base such as I have found at the base of some of the Deccan trap flows of Bhusawal in Berar. These are shown in the photograph to be circulated. This photograph shows the vesicular surface of one flow overlain abruptly by another flow, which is compact, except at the base where tubular vesicles can be seen arranged at right angles to the contact of the two flows. The contact is dipping steeply from left to right and is marked by a geological hammer. Under the microscope the tubular rock is found to be a typical basalt rich in what were once olivine crystals now completely altered to iddingsite and serpentine. Although these Panjal traps must originally have been very similar to the Deccan traps in their mineral composition, yet on account of their greater age and disturbance they have been altered with formation of epidote and chloritic and other secondary minerals. There has also been a certain amount of relative movement between successive flows as shown by the fact that the surface of the underlying flow is epidotic and slickensided. Specimens of both the pipe-rock with its tubular vesicles and of the slickensided surface of a flow are shown therewith.

As previously described, the Panjal traps do not contain olivine. These Botiung rocks are interesting also because some of them carry olivine. It may be remembered that in the Bhusawal flows I found evidence that in many flows olivine crystals had sunk towards the base, and as this tubular specimen containing olivine is also a basal specimen, its richness in this mineral may be due to the same cause. I may mention, however, that a specimen from the interior of one of these flows, which has a coarser grain and is, therefore, a dolerite, also contains olivine, though in smaller quantity.

My previous experience of the details of the Deccan trap basalt and dolerite flows pierced by the Bhusawal boring made me realize at once that here was definite evidence of the effusive

surface origin of at least the Panjal traps of this locality ; and Mr. Wadia impressed upon me at the time that this discovery was also of importance because, although it was generally accepted that the Panjal traps were surface lavas, yet the possibility of their intrusive origin had been at times discussed.

Dr. C. S. Fox said : It is a great step forward in the geology of the Panjal trap to have such definite evidence that in the section described the trap occurs as undoubted lava flows. The fact that no less than three lava sheets occur successively is, with the evidence of the tubular basal vesicular structure and upper amygdaloidal development, convincing data. If a single lava sheet were present some doubt might perhaps exist as to whether it was a sill or a flow. Many sills show cavities under their upper surfaces. Sir Lewis Fermor has written of these Panjal traps as surface flows. From evidence in the Deccan, Abyssinia, and America there seems to be no doubt that in these cases *surface* also means *sub-aerial*. In each of these cases any sediments associated with the lavas are of fresh-water origin—possibly deposited in small lakes over which the lava spread. In Kashmir the lavas are closely associated with marine strata, and it becomes an important point whether the Pir Panjal lavas were poured out on the land or in the sea. Mr. Wadia had concluded that the Agglomeratic slate was largely composed of volcanic debris, but I do not think he has explained whether this material settled in the sea at the time of its ejection. These Agglomeratic slates are closely related to the Panjal traps, and so it is an important point if it can be definitely stated whether these eruptions were submarine or not. So far as I know we have no detailed descriptions of the character—texture and structure—of submarine lava flows at all comparable with those of the Pir Panjal.

Sir Lewis Fermor replied that Dr. Fox had answered the first question for him, namely that the traps at this exposure were lava flows. He added that a pillow structure was regarded as an indication that lavas had been erupted under submarine conditions. He had not observed any signs of such structures in the section described, nor were there any intercalations of marine or other sediments. The evidence is therefore in favour of a terrestrial origin, as with the Deccan lavas.

Mr. W. D. West asked Sir Lewis Fermor if he had seen the exposures described by C. S. Middlemiss and H. S. Bion, which suggested that the Panjal trap may have been in part intrusive.

If the Panjal trap is composed of lava flows, then the period over which they were erupted must have been of great length, from the Upper Carboniferous to the Middle Trias, one of the longest periods of igneous activity known. This was one of the reasons that prompted Mr. Middlemiss to suggest an intrusive origin.

Mr. West also drew attention to the fact that the area over which the Panjal trap was erupted was probably much greater than generally realized. The Mandi trap, first described by Col. McMahon, was very similar to the Panjal trap, and similar rocks are also found even further south-east.

Dr. A. L. Coulson said : I believe that Sir Henry Hayden has described rocks in Tibet very similar to the Panjal trap, which would also show how widespread these volcanic rocks were.

Sir Lewis Fermor replied that he had limited himself to a description of the Panjal trap at the place mentioned by him and that as he had not personally examined the outcrops described by Mr. Middlemiss and Sir Henry Hayden he did not feel competent to pass an opinion on the questions raised by both previous speakers.

Mr. J. B. Auden also spoke.

Mr. D. S. Bhattacharji said: In the Central Provinces (around Bhandara) it is found that pseudo-vesicular lava like rocks (altered) are formed by complex 'elastic' or 'plastic' deformation of one very basic and another acid or intermediate rock, e.g., a suitable combination of greenstone quartz rock, epidosite and granite. The 'vesicles' are filled by quartz, epidote and calcite and quartz, dark crushed rock (very basic and comparable with the green-stone of the Panjal trap), etc. These vesicles sometimes form lenticular masses like tubes of the Panjal trap. These are very old rocks and are older than the Deccan trap.

The Panjal traps are very old rocks and do not show any definite sign of their igneous origin. These are also highly disturbed.

It is therefore possible that the vesicular structure is not original but is only a secondary structure developed by earth movement for a long time. If this is true, the question of extrusion or intrusion does not arise at all.

Sir Lewis Fermor in reply wrote that he had no doubt that the rocks of Botung were igneous rocks judging from both their macroscopic and their microscopic characters. He was not acquainted with Mr. Bhattacharjee's pseudo-vesicular rocks and therefore was not aware how closely they simulated vesicular lavas.

## 2. A. L. COULSON.—*Additional Stones from the Perpeti Meteoric Shower.*

Since the August meeting of the Society, when eleven stones which fell in villages under the jurisdiction of Chandina police station during the Perpeti meteoric shower of the 14th May, 1935, were exhibited, three additional stones, of a total weight of 1,531.604 grams, have been recovered by the District Magistrate from villages under the jurisdiction of Kachua police station in Tippera district. The total weight of all specimens recovered from this shower now amounts to 23,474.18 grams.

One of the three additional stones (298 L) is extremely interesting in being the sole specimen of the shower which shows a secondary crust. This has been developed on two of its faces by their imperfect fusion after their formation as a result of a secondary disruption of the stone in its passage through the earth's atmosphere. The contrast between the generally smooth, thin crust characteristic of all the stones of the Perpeti shower and the coarse, dark, rough, secondary crust on these faces of 298 L is very marked.

The smallest of the three additional stones is an almost perfect crust-covered specimen.

It would appear that the stones of the Perpeti meteoric shower fell within a rectangular area some five miles long by three miles wide, the supposed direction of flight of the parent meteor being in the direction (south-west to north-east) of the shorter side.

Dr. A. I. Coulson said that this evening there seemed to be rather a surfeit of geological exhibitors, with exhibits ranging from tubular vesicles, meteorites, coffins and skulls to earthquakes. He therefore did not propose to take up too much of the time of the meeting.

Dr. Coulson recalled to the members present that at the August meeting of the Society, he had exhibited eleven stones of the meteoric shower that fell at Perpeti in the Tippera district on May 14th, 1935.

Apart from certain characteristics of form, none of those stones had any special interest. It was therefore all the more gratifying to note that of the three extra stones of that shower which had been received since the last meeting, two had features of more than common interest.

The largest stone shows very plainly a secondary crust which has been developed on two of its faces. This secondary crust, as you see, is black, rough to touch, and shows up well in contrast with the smooth, generally thin dark crust on the other parts of the stone. It indicates that this stone, which was born of the parent meteorite when that disrupted into the numerous stones of the Perpeti shower, has itself suffered disruption not very long before it reached the earth's surface. Consequently the time of flight was insufficient for there to be complete fusion of the new surfaces of the stone and only the rough, secondary crust has been formed.

The smallest stone is also very interesting. If one examines closely this surface of the stone, one can see an imperfectly developed system of radiating flow lines. These are due to the effects of surface air currents upon the fused surface of the stone during its flight towards the earth in the atmosphere.

These three additional stones from the Kachua police subdivision, together with the eleven stones previously exhibited from the Chandina police subdivision, both in the Tippera district, form a very valuable addition to the collections of the Geological Survey of India. All of them fell within a rectangular area some five miles by three miles, the shorter side of which is in the direction, north-east to south-west, of the flight of the parent meteorite. This is unusual as one expects the longer side to be in the direction of flight of the parent stone, as in the case of the Dokachi meteoric shower referred to at the last meeting. However the cause may be due to the fact that apart from the two largest stones, weighing about 7 and 5 kg. respectively, all the other stones are less than 2.7 kg. and no fewer than seven of these are more than half a kilogram.

Dr. Coulson added that before concluding his remarks, he would like to draw attention to the report that appeared in to-day's (2nd September) *Statesman*, in which it was stated that the stones of a recent meteoric fall near Comilla, totalling some 52 lbs., had been collected by the District Magistrate of Tippera district and were being sent to the Geological Survey of India. Dr. Coulson stated that if this report were true, then the stones in question were apparently those of the fall on ? 1st August, 1935, near the village Nangalkot, some 20 miles south of Comilla in the Tippera district of Bengal. The first report concerning this fall appeared in the *Ananda Bazar Patrika*, and a copy, after translation by Mr. P. C. Roy, Assistant Curator, Geological Survey of India, who first drew the attention of the Geological Survey of India to it, was sent to the District Magistrate of Tippera. Recently a communication had been received from the District Magistrate to the effect that enquiries were being made and that a further report would be sent by him later. It was to be hoped from the *Statesman* report that the District Magistrate had been successful in obtaining the stones of this Nangalkot fall and that at the next meeting of the Asiatic Society, the members would be able to see them. There was no connection between the Perpeti meteoric shower and this reported fall at Nangalkot; it was sheerest coincidence that two falls so close together, May and August, should happen to be in the same district of Bengal.

Sir B. L. Mitter asked if there were any statutory orders regarding the possession of meteorites.

Dr. Coulson replied that he was unaware of any orders other than those of the Government of India contained in their circular letter referred to at the last meeting, whereby all meteorites falling within the limits of British India were the property of the Government of India and should normally find a resting place in the collections of the Geological Survey of India in the Indian Museum, Calcutta.

Mr. Percy Brown asked if there was any evidence to the effect that falls of meteorites were becoming more frequent in recent years.

Dr. Coulson replied that he did not think that meteorite falls were becoming more frequent in recent years but, as Mr. Percy Brown suggested, falls are nowadays, through the medium of the Press, being brought more frequently to the notice of the public. Also the Government of India orders referred to are becoming more generally known through constant enquiries being made by the Geological Survey of India on the occasion of any new reported fall.

Mr. Van Manen described the very interesting occurrence of shooting stars being seen by him when he was ill in bed and happened to have his head in the same position on his pillow thus being able to see through the same section of his window on two successive nights recently. According to his impression—he had not noted the hour—at approximately the same time of the night, at the same place, and in exactly the same direction, a meteor or shooting star appeared, and became extinguished halfway in the field of vision, at the same approximate distance from the window frame. The luminous track was rather dull than brilliant white. He asked whether these would more likely have been meteors or shooting stars.

Dr. Coulson replied that most meteorites have been recorded as falling within the months of May and June. These are the summer months in the northern hemisphere where most observers are domiciled, but against that must be remembered the fact that very few meteorites are known to fall in July, which is also a summer month. According to Pickering, falling stars and fireballs are much more evenly distributed through the year than are meteorites and their period of greatest number is from July to November. In May and June, in contrast with meteorites, their number is at a minimum. So there is every reason to question the gradation that has been supposed to exist between meteors and meteorites.

### 3. V. P. SONDHI.—*A Coffin and a Skull from a limestone Cave in the Southern Shan States, Burma.*

In the course of a geological traverse in a remote part of the Southern Shan States, Burma, in 1932, while making the usual enquiries on the mineral occurrences in the place, the exhibitor was informed of the existence of a cave there, containing coffins with human skeletons. It was only recently discovered by a honey-collector who had climbed to the mouth of the cave to collect honey from a beehive there, by means of bamboos vertically fixed in the crevices.

The story appeared incredible at the time as not only is no present tribe known to dispose of their dead in this manner, but the transport of heavy coffins to the cave, which is situated in the middle of a sheer cliff some 500 ft. in height, seemed impossible. But the old honey-collector insisted that he had seen the coffins and in support produced a skull that he had grabbed from the nearest coffin. The exhibitor thereupon decided to visit the cave himself and did so twice, in 1933 and 1935, and he has brought back a coffin and a skull. Extensive enquiries in the Shan States failed to elicit any information as to what tribe this burial place could belong to, and the object of the present exhibit is to try the medium of the Asiatic Society of Bengal for this purpose.



Mr. Sondhi said :—

In the course of my geological work in the Southern Shan States, Burma, in 1932, I visited an old silver mine near Melun (Melawn) in the Mawknai State, and while I was making enquiries on the history of the mine and on other mineral occurrences in the area, I was informed of a recent discovery of a cave in the neighbourhood, filled with wooden coffins containing human skeletons. The cave lies in a very inaccessible place, in the centre of a sheer cliff, some 500 feet high, and was discovered quite accidentally by an old inhabitant of Melun, who managed to climb up to it to collect honey from some beehives he had noticed from a distance. While doing so he happened to peep into the cave and was astonished to find it full of coffins with skeletons. He brought down a few bones and an earthen pot that he found near the entrance. The bones were much valued as charms and amulets to ward off evil spirits and were distributed to the villagers, the old honey-collector retaining a complete cranium and the earthen pot for himself. After some persuasion and monetary compensation I took possession of these and brought them down to Rangoon. The pot was made crudely out of poor clay and was only lightly baked, and its shape and size were quite new to the villagers. It reached Rangoon safely but in a few days it fell to small pieces due to excessive humidity. The skull was shown to Col. Lack, I.M.S., then Principal, Medical School, Rangoon, who thought it belonged to a modern man.

While discussing with the villagers as to what tribe these coffins and skeletons could possibly belong to, I was told of a strong and widespread belief that there existed in the jungles in the neighbourhood, a primitive type of human beings who roam about like other denizens of the forest. They were described as hairy men about the size of an average Shan but none of the villagers present had actually seen one, although one or two asserted that they had seen their foot-prints and had heard their voices from a distance. I was also informed that human bones were sometimes found in places where their presence is not accounted for, and rarely an earthen pot or a wooden implement is picked up, of a type unknown to the villagers ; but none of these things could be produced for my inspection because such things, I was told, were not preserved, they being of no good to anybody. These primitive men keep well out of sight of the civilized men and away from their habitations. But sometimes when the paddy is ripe they are reported to have approached the villages and fields at night and decamped with paddy. They are also reported to chop at trees with an upward stroke which is contrary to the common practice. The villagers are usually shy of talking on such matters for fear of being ridiculed but when encouraged and listened to patiently they become communicative. It is curious that whereas an average native of these parts attributes any and all inexplicable occurrences to 'Nat', the Lord of Evil, whom they fear and revere, the supposed primitive human beings are spoken of in a patronizing and light-hearted manner, and their actions are regarded as the misdeeds of a spoilt child.

There seemed to be no way of proving the existence of these primitive people but I decided personally to confirm the truth of the story about the cave and the coffins. On return to Calcutta I discussed the story with Dr. S. L. Hora and he also impressed on me the necessity of a visit to the cave and of recovering a coffin if possible.

An opportunity offered itself in 1933 when, with the help of some villagers, a light bamboo scaffolding was put up. The only practicable way of reaching the cave is first to climb the slope just to the east of the cliff, up to the level of the cave, and then to negotiate the remaining distance of about 30 yards by walking over bamboos fixed in between crevices and ledges. During this trip I was led by the original discoverer. In order to keep both hands free for clutching at any holds that might offer on the rock-face we had to leave behind things like ropes, spades, lanterns, etc. A small camera and some flash-powder



FIG. 1.

stone cliff with the arrows pointing to the cave. The dotted line represents the route taken. Below the cave, and slightly to the right is seen the bamboo scaffolding as used in the first visit.

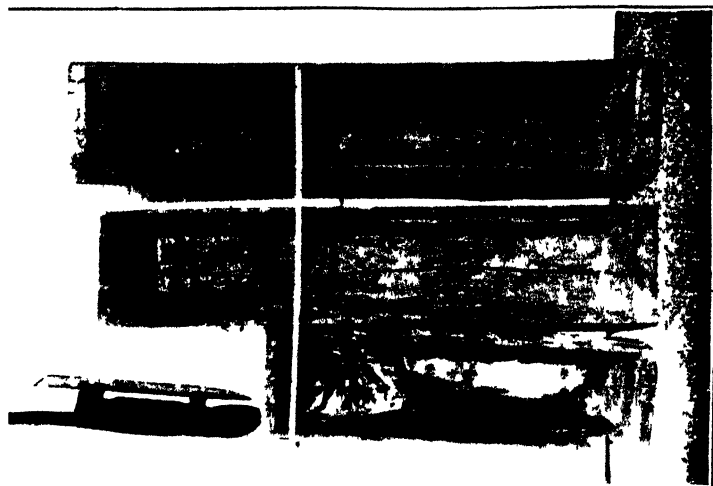


FIG. 2.

FIG. 2. The three coffins brought out of the cave. The one on the right was exhibited in the meeting. The one on the left has an animal figure (inserted above) carved on the reverse side.

were carried in pockets. Boots had to be discarded as they slipped badly on the bamboos, and although the latter were extremely hot in the midday sun, they had to be negotiated barefeet. It was very much like tight-rope walking, only the rope in this case was a hot bamboo! We had constantly to face the rock-wall, lean against it and move sideways. With difficulty we reached the mouth of the cave and crawled in through the crooked entrance.

The cave is in reality a natural fissure in the limestone, with a slanting roof and an uneven floor. The coffins and human bones were there as described by the honey-collector, and it was so full of these that movement inside the cave was difficult. We had hardly crawled some 10 feet when the old guide picked up a freshly shed skin of a large snake! As we were not prepared to meet such an emergency I thought it best to make a hurried retreat before we annoyed the possessor of the skin. Moreover, a glance was enough to show that there was nothing else we could do beyond confirming the discovery. It was impossible to take any photograph in our cramped position; we could not get far enough from the coffins for the purpose and we could not use the flash for fear of choking ourselves with fumes and also for fear of accidentally igniting the coffins, which were tinder-dry. It was also impossible for us to bring down a coffin or even to throw one out, as in that case not only would the coffin be reduced to splinters on landing below the cliff but it would at the same time sweep away our scaffolding from below the mouth of the cave which was our only possible way of retreat. It was clear that for further exploration a better-equipped party was needed.

The discovery was brought to the notice of the Commissioner, Federated Shan States, Mr. J. Clague, I.C.S., who at once took a great interest in it, and it was made known to other officers with a view to collecting whatever information they could.

In March, 1935, we got up a party consisting of Mr. N. W. Kelly, Capt. R. L. Frost, Mrs. Frost, Mr. P. A. Plunkett, three officers of a timber company, and myself. We owe the success of this expedition entirely to the excellent and thorough arrangements made by Mr. Kelly, to whom we are all indebted. A number of villagers was collected and a strong bamboo scaffolding was rigged up under his supervision. As there was no room for all of us in the cave we went in in relays. A look inside the cave was enough to show that the cave had been raided since my last visit. There were very few bones left now and practically no skull was obtained. The coffins too were not arranged now in the manner I had seen them last. As we had lights this time we could see further in. There were some 30 to 40 coffins in the portion of the cave visible to us. They varied in size and in some cases, slightly in design. They are all carved out of solid logs of teak and the outer surfaces are levelled by short chopping strokes rather than by a saw, much in the manner that the present day Burmese and Shan dug-out are made. The average dimensions are somewhat less than those required to accommodate an average man, and it is presumed that the corpses must have been in a shrunken state to fit these coffins. One of the three coffins brought down has the figure of a four-legged animal (lizard?) carved out of the same log as the coffin, and there are traces of another similar figure facing it. Presumably this formed a lid to a coffin. From the growth rings exposed on the ends of the coffin we find that it was carved out of a quarter of a log of teak and some of the logs must have been from 3 to 4 feet in diameter. Coffins near the floor of the cave were usually rotten but those higher up were mostly in a good state of preservation. It may either indicate a greater age for the coffins nearer the bottom, or it may be due to greater amount of moisture on the floor, which, it is possible, may be partly under water in the rainy season.

A curious feature of the bones collected is that almost all the long bones—those of the legs, are roughly cut or scraped at more or less the same position at the two terminals. The parallel narrow grooves and

lines are like those produced by the gnawing of rodents, but it has been suggested that these cuts might be a *post mortem* mutilation by human agency representing some kind of a burial ritual of a particular tribe. Among the bones collected there are a few slender ones, one of which exhibited here has kindly been identified by Dr. B. Prashad as a femur of a young monkey.

Extensive enquiries in the Shan States have so far failed to elicit any information as to what tribe this burial place could belong to. All the existing tribes bury their dead underground except for Buddhist monks and the members of ruling families who are cremated. Other equally puzzling problems, though of local interest, are: how were the coffins transported to the cave, and how did the bones come to be mutilated? The coffins could not have been lowered from the summit of the cliff to the cave. It is possible that the cave or the fissure, extends further than we could see, to the other side of the hill, and was entered into from that direction. No trace of such an entrance, however, exists. Possibly it existed formerly, and was filled up after the cave was fully loaded with the coffins, and the tropical growth obliterated the site in a few years. The only other conceivable way would be by a rock ledge that may have once extended over the gaps that we had to span with bamboo scaffolding. This could have been broken down after the cave was full, or possibly the ledge fell off itself through natural agencies, such as an earthquake or a land-slide. A narrow ledge does, in fact, extend over part of the way and lends support to this supposition.

The object of the present exhibit is to circulate among the members of the Society the circumstances of the discovery of coffins containing human skeletons in an inaccessible cave in a remote part of Burma, in the hope that some light will be thrown by them on this mysterious occurrence and on the various problems connected with it.

Dr. Bains Prashad described the human bones submitted to him for examination. He added that the grooves, or marks, occurring at the end of the bones seemed to him produced by rodents and not by human agency. He added that the femur of a monkey was found free from such markings.

Dr. Hora remarked that in 1933 he enquired from Mr. Sondhi if he had heard any stories of 'wild men' during his extensive travels in Burma. The information was required for Mr. Johan van Manen who was then making a detailed study of the subject. Mr. Sondhi gave him an account of a supposed hairy primitive tribe near the village of Melun in Burma and mentioned the existence of a large number of their peculiar coffins in a cave. At the speaker's suggestion Mr. Sondhi wrote a note about this tribe which was shown to Dr. B. S. Guha, Anthropologist with the Zoological Survey of India. The speaker had also requested Mr. Sondhi to take further interest in the subject and it was a matter of great pleasure to him that so many fresh details had been gathered. On Dr. Guha's return the information now available would be supplied to him and the speaker did not doubt that Dr. Guha would be able to throw some light on these peculiar customs. In the meantime if Mr. Sondhi could get further opportunities to collect more material, he should do his best to avail himself of these and send the material to the Zoological Survey of India for investigation.

Dr. Guha's comments on Mr. Sondhi's note were as follows:—

Mr. Sondhi's note on the existence of a hairy primitive tribe near the village of Melun (Burma) is very interesting and calls for a thorough exploration of the region. Of the existence of a non-mongoloid primitive stratum in the population of the unexplored regions of Burma we have many evidences and remnants of the same racial stock in comparatively unmixed state may very possibly be found in isolated tracts not explored so far. Exposure of dead bodies in canoes is part of a widely spread

custom of the disposal of the dead which links further India with Oceania.

I would suggest : (i) photographs and all details regarding this form of the disposal of the dead be taken and if possible locate the tribe which still practices this, (ii) collection of all skulls and if possible other objects, such as earthen pots etcetera, which are left there. If an entire canoe can be procured so much the better. In any case I would strongly urge that all the skulls that can be got hold of should be kept and sent to us in the Indian Museum. The more skulls that can be procured the better for our purpose. If possible attempts should be made to get the mandibles with the skulls. Skulls should be given preference to, no doubt, but other bones, specially the pelvic and the long bones are very useful for study. If ascertainable the bones of each single skeleton should be marked separately so that there is no chance of their getting mixed up.

If living men of the tribe be observable, then photos should be taken of them as well as of their habitations, and all details regarding their mode of life and customs should be gathered.

Mr. *Van Manen* drew attention to a most remarkable coincidence in connection with this matter. Exactly 40 years ago a similar discovery was made under similar circumstances, though in a place far distant from the Shan State and apparently unrelated to them and their inhabitants. The description of that earlier discovery was published in the *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 26, (1897), page 33ff. The full title of that communication ran :—

‘On Unusual Forms of Burial by People of the East Coast of Borneo. By C. V. Croagh, Esq.’

For purposes of comparison it is sufficient to quote the ‘Extract from Diary for March, 1895’ with which the note opens :—

‘March 13th. —Visited some caves in a limestone hill on the left bank of the river near the Batu Puteh estate. These caves were used as burial places by a former race of inhabitants of whom none of the present settlers or traders on the Kinabatangan could give me any information. The entrance to the upper cave (being in the face of an almost perpendicular rock at about seventy or eighty feet from the ground) is somewhat difficult to reach. It contains about 40 bilian (—ironwood) coffins, artistically carved with figures of buffaloes, crocodiles, lizards, and snakes, containing skeletons of men, women, and children ; and also sumpitans, spears, and articles of Chinese and other pottery, with brass ornaments of native and foreign workmanship. The relics appear to me to be of Javanese origin, but there is no tradition on the river of settlers of this nationality. The carvings and scroll work on some of the coffins are superior to those now executed by native workmen.’

The further details are given in a brief note, only two and a half printed pages in length, with illustrations added on another page.

The speaker hoped that in further investigations regarding Mr. Sondhi's discovery, the previous one from Borneo should be kept in mind.

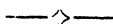
#### 4. W. D. WEST.—*Cinematograph Film of Quetta after the Earthquake.*

A short film showing the destruction wrought by the earthquake in various parts of Quetta and at Mastung. Of particular interest are new earthquake-proof bungalows built by the N.-W. Ry. since the last earthquake, and quite undamaged by the present earthquake.

Mr. *West* said that the film was taken with the object of placing on permanent record the effects of the earthquake in Quetta and the surrounding country, and of showing the relation between the damage sustained by buildings and the nature of their construction. The great

loss of life, the largest that has occurred in any Indian earthquake, was directly attributable to the inferior construction of the buildings.

Some of the features of the earthquake shown in the film included the complete destruction of Quetta city; the gradual decrease in the intensity of the damage towards the Cantonment and the Staff College, which was scarcely affected; the manner in which certain buildings recently constructed by the North-Western Railway on earthquake-proof lines escaped undamaged; the rotation of monuments in the cemetery; the heavy falls of rock on Chiltan mountain; the fissuring of the alluvium between Chiltan and Mastung, and the associated buckling of the railway line; and the general destruction in Mastung.



### NOVEMBER, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 4th. at 5-30 P.M.

#### PRESENT.

SIR LEWIS FERMOR, K.T., O.B.E., D.Sc., A.R.S.M., F.G.S.,  
M.INST.M.M., F.R.S., F.A.S.B. President, in the Chair.

#### *Members*

Basu, Mr. N. M.  
Bose, Mr. M. M.  
Brahmachari, Sir U. N.  
Brown, Mr. Percy  
Chatterjee, Mr. P. P.  
Chatterji, Dr. S. K.  
Coulson, Dr. A. L.  
Dey, Mr. Mukul  
Driver, Mr. D. C.  
Ezra, Sir David  
Fawcus, Mr. L. R.  
Ghose, Mr. T. P.

Ghuznavi, Mr. I. S. K.  
Groth, Mr. E. M.  
Heron, Dr. A. M.  
Hobbs, Mr. Harry  
Hora, Dr. S. L.  
Hosain, Dr. M. H.  
Jam, Mr. C. L.  
Majumdar, Mr. N. G.  
Mann, Mr. Johan van  
Mitter, Sir B. L.  
Mukherjee, Dr. J. N.  
Ow-Wachendorf, Baron W.

West, Mr. W. D.

#### *Visitors*

Blake, Mrs. G. F.  
Brown, Mrs. Percy  
Ezra, Lady

Fermor, Lady  
Hafiz, Dr. H. A.  
Ow-Wachendorf, Baroness

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of eleven presentations of books, etc., which had been placed on the table for inspection.

The General Secretary reported that the following candidates had been elected Ordinary Members during the recess month, October, under Rule 7 :—

(21) *Mitter, Sudhir Chunder*, Barrister-at-Law, 19, Camac Street, Calcutta.

Proposer : Sir B. L. Mitter.

Seconder : Sir L. L. Fermor.

(22) *Chaudhuri, Sachindra Nath*, Barrister-at-Law, 52, Ballygunge Circular Road, Calcutta.

Proposer : Sir B. L. Mitter.

Seconder : Sir L. L. Fermor.

(23) *Banerjee, Sailendra Nath*, Barrister-at-Law, 307, Circus Avenue, Calcutta.

Proposer : Sir B. L. Mitter.

Seconder : Sir L. L. Fermor.

(24) *Dutt, Mohendra Nath*, L.E., I.Eng.S. (Retired), Consulting Engineer, Late Executive Engineer. P.W.D., 6, Old Post Office Street, Calcutta; 12, Kailas Bose Lane, Howrah.

Proposer : Sir B. L. Mitter.

Seconder : Sir L. L. Fermor.

(25) *Basu, Satyendra Kumar*, M.Sc., Extra Assistant Conservator of Forests, Clover Cot, Darjeeling.

Proposer : N. K. Basu.

Seconder : Sir U. N. Brahmachari.

The General Secretary announced that the following candidates would be balloted for as Ordinary Members :—

(26) *Bor, N. L.*, M.A., D.Sc., F.L.S., I.F.S., c/o. The Conservator of Forests, Shillong, Assam.

Proposer : S. L. Hora.

Seconder : R. N. Chopra.

(27) *Anina Klebe, née Brandt*, Ph.D. (Greifswald, Germany), Psychologist, 14/1, Sudder Street, Calcutta.

Proposer : N. Barwell.

Seconder : Johan van Manen.

(28) *Hirtzel, Michael Arthur Frederick*, B.A. (Trinity College, Oxford), Mercantile Assistant, Macneill & Co., 2, Fairlie Place; 18, Alipore Park Road East, Calcutta.

Proposer : N. Barwell.

Seconder : Johan van Manen.

The General Secretary reported the following loss of membership, since the previous meeting, by death :—

(8) Lt.-Col. H. W. Acton (An Ordinary Member, 1921, Fellow, 1930).

(9) Dr. P. J. Brühl (Life Member, 1909, Fellow, 1912).

(10) Dr. J. N. Maitra (An Ordinary Member, 1918).

(11) Dr. Sylvain Lévi (An Honorary Fellow, 1920).

The General Secretary read an obituary notice of Dr. Sylvain Lévi (see page 219).

The General Secretary reported receipt of news of the death of the following former Members of the Society :—

Sir John Thompson (An Ordinary Member from 1909 to 1933).

Sir D. P. Sarvadhikary (An Ordinary Member from 1909 to 1935 ; Vice-President from 1924 to 1929).

Dr. G. N. Mukhopadhyaya (An Ordinary Member from 1908 to 1931 ; Fellow from 1923 to 1931).

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(19) Otto Hubert (An Ordinary Member, 1926).

The General Secretary reported that there had been no lapses of election, since the previous meeting, under Rule 9.

The General Secretary reported that there had been no withdrawals of application, since the previous meeting.

In accordance with Rule 40, the General Secretary reported that the names of the following Ordinary Members would be removed from the next Member list of the Society :—

- |                     |                    |
|---------------------|--------------------|
| 1. Count Bassowitz. | 4. Thornton Jones. |
| 2. R. Friel.        | 5. Hans Koester.   |
| 3. R. Y. Jarvis.    | 6. C. E. Lomax.    |

In accordance with Rule 48(a), the General Secretary reported that the Council, since the last Ordinary Monthly Meeting, had adopted certain modifications in the Regulations regarding the award of the various Memorial Medals awarded by the Society, as follows :—

1. BARCLAY MEMORIAL MEDAL.

Regulation 1 : *Read* 'every two years' for 'each alternate year'.

2. SIR WILLIAM JONES MEMORIAL MEDAL.

Regulation 1 : *Read* 'every three years' for 'biennially'.

3. ALL MEDALS.

Regulation 1 : *Read* 'shall ordinarily be awarded' instead of 'shall be awarded'.

Regulation 3 : *Insert* 'In any year preceding one in which the award will be due' before 'The Council shall'.

Regulation 6 : *Read* as follows :—

(6) The Advisory Board shall submit to the Council the name of the person to whom, in the Board's opinion, the Medal should be awarded. It shall be open to the Board to report to the Council that no award should be made for the year ; and, in such case, provided the Council concurs, a new Advisory Board shall be constituted in the following year, and so on, from year to year, in the manner prescribed above, till recommendation is made for an award and accepted by the Council. The period of years mentioned in Regulation 1 shall always be counted from the year of the Award.

4. PRAMATHA NATH BOSE MEMORIAL MEDAL.

Regulation 3 : Second paragraph, *read* :—

The Council shall then proceed to appoint an Advisory Board which shall include not less than three out of the names placed before the meeting by the General Secretary. The Board shall always include at least two Geological Experts ; and the General Secretary shall be an *ex-officio* member and Secretary of the Board. The Council may, for special reasons, appoint one or more Experts to the Board other than those named by the General Secretary.



Papers were presented, and Exhibits were shown and commented upon, as detailed below.

The Chairman announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman announced that a meeting of the Medical Section had been arranged to be held in the Society's Rooms, on Monday, the 18th November, at 6 P.M., when the following papers would be read :—

1. S. L. HORA.—*Recent Indian cases of live fishes impacted in the food and air passages of man.*

2. B. G. MALLAYA.—*Surgical aspect of live fishes impacted in the human food and air passages.*

The following exhibits were shown and commented upon :—

1. PERCY BROWN.—*Portrait of a Lady of the Elizabethan Period.*

Some time ago I acquired in India a miniature painting of a lady, which, according to her costume, shows that she belonged to the Elizabethan period (1533–1603), or shortly after. It is inscribed 'Badshazadi Velayet Angrez', but it is hardly likely to be the portrait of an English Princess, and I suspect this writing was a subsequent addition by an uneducated hand. It seems not improbable that this miniature was painted about the time that the costume it depicts was the vogue in England, say at the beginning of the 17th century.

The questions that arise are two : (1) who is the lady, and (2) who is it by ?

We will take the latter first. That the picture has an English origin there can be little doubt, and the English miniature painters of the early 17th century can be counted on the fingers of one hand. Among these were two of the name of Oliver, father and son, of whom we read that they were responsible for portraits of a larger size than usual, some of them measuring as much as 10 inches by 9 inches. I am presuming the date of this picture was in the vicinity of 1610, in which case the original painter would have been Isaac Oliver, the father, who would have been at his best at that date. Its size also confirms the Oliver attribution.

It is doubtful however whether it is the actual handiwork of an English painter, although this point has not been definitely decided. There is much in the technique, for instance, which it appears could only have been produced by an artist trained in the English tradition : on the other hand there are also certain indications of an oriental style of workmanship in some of the accessories. Both these somewhat conflicting conditions can, however, be more or less harmonized if it is considered that the

picture is a copy by a leading Indian artist of an original by an English artist, such as the elder Oliver.

Now for the question as to the subject of the painting. In the account of 'The Embassy of Sir Thomas Roe', the English Ambassador who spent the years 1615 to 1619 at the Court of the 'Great Mogul', there are several well-known references to the art of miniature painting. On one occasion there was an animated conversation between Roe and the Emperor Jahangir regarding a portrait of a lady in the possession of the former, and which the Emperor much admired. This miniature, it transpired, was one of Lady Roe, and eventually it was lent to Jahangir from which he had five copies made by his own Court painters, after which it was returned to the Ambassador.

In the circumstances it seems not improbable that the present exhibit was one of these copies, and, if so, it has several interests. In the first place it shows the marvellous faculty of Jahangir's artists for imitation, and also their expertness in the miniature painter's art, and its technique. But perhaps equally important it brings before us the portrait of a lady, who, as Lady Roe, appears to have possessed more than the ordinary virtues. For Roe's last will and testament includes the following :—

'Here I take my last leave of her, my most faithful loving and discreet companion in all the troubles and infirmities of my life, beseeching God that we may meet in the joys of heaven; and I desire that my whole will may be interpreted for her best advantage, for I am not otherwise able but with love to requite her merits to me.'

Mr. Brown said :—

The incidents presumed to associate this miniature with Lady Roe will be found on pages 225 and 255 of 'The Embassy of Sir Thomas Roe (Vol. 1) by W. Foster, Hakluyt Society'. In this connection it is an inexplicable fact that there is no mention of this embassy in Jahangir's own voluminous memoirs, although Roe was in frequent personal contact with this Mughal Emperor during the course of his mission.

It is fairly clear that the picture is a miniature painting copied by an Indian artist from an English original, as besides the technique there are certain details in the picture which the artist has not quite understood and has accordingly reproduced without adequate knowledge. That the Mughal painter was, however, a genius in his art is shown by the manner in which he has treated the face and hands, particularly the right hand of the lady, which is beautifully rendered. From certain differences in the brush work it is not improbable that this miniature was prepared by two artists, one being a specialist in *chitra-numā* or portraiture, and the other in *surat* or figure drawing. There may also have been a third who provided the background.

Roe's interest in miniature painting is shown by the fact that he included a small selection of these among his effects while on his travels, and the subject was brought up several times by the Emperor Jahangir who was equally interested in this form of painting, during his conversations with the Ambassador. On one occasion Roe showed the emperor

two miniatures one of which impressed Jahangir greatly, and the possession of which it is evident he coveted. Roe managed to retain this work of art by stratagem and by declaring that it was a likeness of 'a frend of myne that was dead'. Jahangir's eulogies of the portrait which Roe relates verbatim contained the remark that 'hee confessed hee neuer sawe so much arte, so much bewty, and Conjured mee to tell him truly whither euer such a woeman liued'.

As a matter of fact the lady was alive and in England, married to Roe just before he left for India, but the fact was kept secret for certain family reasons, hence the ambassador's diplomatic statement that the original of the miniature 'was now dead'. On Roe's return to England all necessity for any concealment had evidently disappeared, and they were never again separated. That Lady Roe was a devoted companion as well as a woman of strong determination is shown by her staunchness to her husband in several subsequent difficult situations while he was doing duty abroad. The miniature here exhibited seems to bear out this latter quality, which is clearly a portrait representing an aristocratic personage of more than ordinary character.

Dr. *Hidayat Hosain* said that the inscription on the miniature read 'Padshazadi vilayat angriz', the English princess, or more literally 'born of the British King'. The handwriting was modern and the inscription may date from long after the date of the picture itself.

Mr. *M. M. Bose* asked three questions as follows :—

1. Is the art of miniature painting an important art in India ?
2. If so, from where and when ?
3. What is the earliest specimen of miniature painting found, up to the present, in India ?

Mr. *Brown* replied :—

With regard to the art of miniature painting in India, it may be said that it was in its early period generally produced on paper, so that its date corresponds approximately with the introduction of paper into this country. The earliest paintings which may be designated 'miniatures', although actually they were illustrations to manuscripts, appear on the western side of India about the 9th or 10th century A.D., and there are other rare specimens of somewhat the same period which have been discovered in Bengal.

As to whether the art was imported, it may be said that the miniature, in its usually accepted form, was brought into being in India during the Mughal period, by artists from Persia, but 'paintings in little', as they were then called, were, as stated above, produced by Indian artists at an early date.

## 2. A. L. COULSON.—*The Patwar Meteorite.*

At the September meeting of the Society, when certain additional stones of the Perpeti meteoric shower were exhibited, mention was made of the reported fall of a meteorite near Nangalkot in the Tippera district of Bengal. As a result of enquiries made by the Geological Survey of India, it has since been ascertained that at about 14.20 hours on the 29th July, 1935, a meteoric shower occurred near the villages of Patwar (23° 9' : 91° 11'), Bhatupara, Gotrasal, Fatehpur, and Majhipara, near Nangalkot, some 20 miles due south of Comilla, the chief town of Tippera district. Patwar is only some 17 miles south-east of Perpeti, also in the Tippera district, which is the locality of the shower referred to above. The two falls, however, are

distinct, but it would be interesting to learn of any other occurrence of two separate meteoric showers within 17 miles of each other after a lapse of two and a half months.

So far three specimens, totalling 35,013.5 grams, which fell at the three first-named villages, have been recovered, the largest (23,111.6 grams) falling at Patwar which gives its name to the fall. However, two small additional stones from the villages of Fatehpur and Majhipara have been recovered and sent to the District Magistrate, Comilla; it is hoped that these will be received in time for them also to be exhibited at this November meeting of the Society.

The fall was accompanied by the usual phenomena of light and sound. A dazzling light following a 'loud rumbling noise' is supposed to have been the first indication to the villagers of the fall of the meteorite. The sound is stated to have been so loud and continued that those in the police thana at Chauddagam, some 7 miles to the north-east of Fatehpur, the nearest locality to the thana from where stones were recovered, distinctly heard it. Four reports 'like thunder' were heard in quick succession. One observer adds that a peculiar sound like 'that of an aeroplane' followed the reports; this may have reference to the passage through the atmosphere of the disrupted members of the parent meteorite.

The largest specimen penetrated the ground to a depth of 34 inches.

The parent meteorite appears to have been moving in a west-south-westerly direction. The smallest pieces fell first, followed in succession by the larger. The total rectangular area covered by the shower is roughly about  $4\frac{1}{2}$  square miles, the length being some three miles in the direction E.S.E.-W.S.W.

The meteorite has great interest on account of its rather rare composition. It belongs to the group of mesosiderites, being a siderolite intermediate in composition between a stone and an iron. It contains large crystals of olivine and masses of nickel-iron of fair size. It is composed chiefly of nickel-iron, with olivine, enstatite and bytownite, with smaller amounts of schreibersite, troilite, oldhamite, lawrencite and hydrocarbons. Its specific gravity is 4.21.

The Patwar mesosiderite will be described in a paper appearing in the *Records* of the Geological Survey of India. The specimens are exhibited by permission of the Director, Geological Survey of India.

Dr. Coulson stated that this was the third successive meeting of the Society at which he had exhibited meteorites. Consequently it was with considerable diffidence that he addressed the Members present, but he claimed their indulgence as the specimens of the Patwar meteoric shower of the 29th July, 1935, were of great scientific interest and rarity, belonging to the sub-group of mesosiderites intermediate between meteoric irons

and stones. In order that Members might note the intermediate character of the specimens of the Patwar shower, Dr. Coulson drew their attention to a specimen of the Bahjoi iron meteorite which Dr. Krishnan had exhibited at a previous meeting of the Society. Iron meteorites are far rarer in occurrence than stone meteorites and the Bahjoi meteorite, which fell on the 23rd July, 1934, in the Moradabad district of the United Provinces, was the first iron meteorite recovered in India since the shower of meteoric irons at Samelia in Rajputana on the 20th May, 1921, which was described by your President. The attention of members was also drawn to a typical specimen of a meteoric stone, one of the Perpeti meteoric shower of the 14th May, 1935, which Dr. Coulson had exhibited at the August meeting of the Society.

Dr. Coulson stated that Members would be pleased to learn that the two additional stones, each weighing about a kilogram, that had been mentioned in the account of to-day's exhibit, had been received by the Geological Survey and formed part of the specimens on the table. Altogether five specimens of a total weight of 37,353.28 grams had been recovered from the Patwar fall and this made the fall rank third in the total amount recovered from any particular meteorite fall and in the possession of the Geological Survey of India. It was exceeded by the Merna fall of August 30th, 1920 (71,406 grams), and the Kuttippuram fall of April 6th, 1914 (38,437 grams).

It was interesting to note that the largest stone, weighing some 23 kg., had penetrated the soft ground to a depth of 34 inches, whilst the two next largest stones had penetrated 24 inches. Details as to the depth at which the smallest stones were recovered, were not available.

The third largest stone had been cut in two for purposes of study and the cut surfaces had been highly polished. The structure of the mesosiderite showed up well on the polished surface. The large crystals were either composed solely of olivine or of a granular aggregate of olivine and bytownite feldspar. The dull metallic-looking mineral was nickel-iron in one or other of its various alloys. The other minerals present were given in the account of the exhibit.

Finally Dr. Coulson drew attention to the proximity of this fall to the Perpeti fall, Perpeti being some 17 miles north-west of Patwar. The composition of the two meteorites was totally dissimilar, however. He added that while the Perpeti shower covered a rectangular area of some 15 square miles with the shorter side of three miles in the direction of flight of the parent meteorite before it was disrupted, the Patwar shower covered the much smaller area of  $4\frac{1}{2}$  square miles, the longer side of three miles being in the original direction of flight.

*The President* in inviting discussion upon Dr. Coulson's exhibit said that he did not share Dr. Coulson's regrets that he (Dr. Coulson) had had occasion to address the Society upon meteorites at three successive meetings. Considering the great interest inherent in these visitors from outer space everyone would agree that there would be a welcome for all the exhibits of meteorite material that could be placed before the Society.

The present meteorite was one of exceptional interest in that it was a mesosiderite occupying an intermediate position between stony and iron meteorites. Although many meteorites had fallen during his service in India Sir Lewis could not recall that any one of them had been a mesosiderite.

*Prof. J. N. Mukherji* asked whether any systematic determination of the atomic weights of elements found in meteorites had ever been carried out.

*Dr. Coulson* replied that he was not aware of any recent research in this direction.

*Baron W. Ow-Wachendorf* drew attention to the locally so-called 'meteoric iron' surrounding diamonds in South-West Africa. Was that iron really meteoric or was it ironstone derived by lateritic processes from the gravels?

Dr. Coulson replied that probably the latter explanation of the origin of the ironstone was the correct one. Diamonds of course were known to occur in iron meteorites, but it was most unlikely that the 'iron' surrounding the diamonds in the gravels was actually iron and not one of the oxides, and that it had a meteoric origin. Baron Ow-Wachendorf was no doubt aware that it was at Hoba in South-West Africa that the largest known iron meteorite occurred—this weighed 60 metric tons and was still *in situ*.

Mr. H. Hobbs asked if there were any elements in meteorites that had not been found in the rocks of the earth's crust.

Dr. Coulson replied that there were no such elements. Not all the elements found terrestrially, however, had been found in meteorites, those of high atomic weight, with the exception of the platinum metals, generally being absent from meteorites. The apparent universal absence of barium and strontium may perhaps be accounted for by the paucity of feldspathic minerals in the meteorites examined. It was interesting to note that there were two minerals occurring in meteorites that had not been detected in terrestrial rocks as they could not exist unaltered in the conditions of oxidation characterising the crustal regions. The minerals were oldhamite, the sulphide of calcium named after a former Director of the Geological Survey of India, and schreibersite, a phosphide of iron, nickel and cobalt.

Mr. Van Manen referred to the article on 'Meteorite' in the 'Encyclopædia Britannica' and stated that he would like further information with regard to three statements made therein. The first was the statement regarding the general similarity of meteorites in chemical composition and the fact, that they were supposed to be derived from a single celestial body. The second statement was to the effect that though the earliest recorded fall in China was about 644 B.C., strange to say, until quite recently, no meteorite in that country appears to have been preserved. Was this due to any geographical immunity of China from meteorite falls or to some superstitious awe in which meteorites were held being responsible for their being destroyed by the inhabitants? The third statement was to the effect that with the exception of one meteoric iron found in Pliocene gravels in the Klondike, 'fossil' meteorites are unknown. What was the sense in which the term 'fossil' was used?

Dr. Coulson replied that he was pleased that Mr. Van Manen had raised these three points as he recently had had occasion to refer to the article in question when preparing material for a lecture delivered before the Mining and Geological Institute of India at Dhanbad.

The first question raised the vexed problem as to the origin of meteorites. Members were aware of the nature of comets with their relatively small mass spread through a large volume of space. The tails of comets are in a much more finely divided state than the heads which are made up of fairly large lumps for which the gravitational force is stronger than the repulsive force from the sun which affects the tails. These lumps are some feet in diameter comparable in size with large meteorites. Comets are part of the solar system which contains a very large number of them. Their orbits are elliptical and some of the long-period comets can recede away from the sun quite a large fraction of the 25,000,000,000,000 miles separating us from the nearest fixed star. It has been suggested that meteorites are identical with the material of comets and in that case to be moving through space in swarms with definite orbits. However, while certain meteorites may perhaps be the debris of comets, we must look elsewhere for the origin of the greater number of them.

Dr. Coulson referred briefly to meteors, which term is restricted to those cosmical bodies which, entering the earth's atmosphere from without and shooting across the sky, give the appearance of a bright star in rapid motion. Meteors are only a few milligrams in weight but it has been held by some that there is a gradual transition from them to meteorites.

However a study of the times of occurrence of meteor showers shows that they do not agree with meteorites in the months in which they are most plentiful and, also, only one meteorite, the Mazapil iron, has been known to fall during a shooting star display. It has been shown, in addition, that though there is an intimate connection between the orbits of comets and some meteor streams, yet many of the meteors must have come from solar systems other than our own. The parabolic velocity of 26 miles per second, which a body falling from rest at an infinite distance towards the sun attains when it passes the earth's orbit, is the maximum that a body can have if it originated in our solar system. Of course when considering the maximum velocity that a meteorite can have relative to the earth, due account must be made of the velocity of the earth in its orbit. Taking into account also the velocity due to the earth's attraction and neglecting the earth's surface velocity, the maximum velocity relative to the earth with which a meteorite can fall if it originated in our solar system is about 47.4 miles per second and the least about 8.2 miles per second. It has been calculated from the observed velocities of meteors that certain of them must have originated in solar systems other than our own.

If most meteorites have been derived from the disruption of a planet or planetoid in the solar system, the question naturally arises as to when this disruption took place. Here we have the assistance of the very valuable work performed recently by F. Paneth and his assistants in the measurement of the helium content of iron meteorites with a very sensitive apparatus. If meteorites are the scattered portions of our solar system, then their age cannot be greater than that of the solar system itself which is assumed to be about 3,000,000,000 years at the utmost. If, however, meteorites came from other stars, it is possible that the period of their solidification could date back some 10,000,000,000,000 years. Not one of the iron meteorites studied had been found to be older than 2,900,000,000 years and so the solidification date accords well with the assumption that iron meteorites, and we may presume stone meteorites as well, originated not from distant celestial bodies but from our solar system. The date of solidification, also, ranges in time almost up to the date of the birth of the earth and the solar system and it may be that meteorites represent ungarnered fragments from the birth of the solar system and not the product of the later disruption of a planet or planetoid.

With regard to Mr. Van Manen's question concerning the absence of meteorites from China, there is no fundamental reason why meteorites should be more numerous upon one part of the earth's surface than on another. There is thus no reason to presume that meteorites have not fallen in China just as frequently as in other parts of the world and the absence of records may be due to some such cause as suggested by Mr. Van Manen.

The term 'fossil' meteorite was used in the usual sense of the word 'fossil' as being something, in this case a meteorite, entombed in strata that was being laid down contemporaneously. The absence of fossil meteorites, except for the single case of one in the Pliocene gravels of the Klondike, may be due to weathering, metamorphic and other agencies so altering meteorites as to render them unrecognizable as such.

*The President*, referring to the question of the rarity of fossil meteorites, expressed the view that no satisfactory conclusion could be drawn from the absence of fossil meteorites from all geological formations except for the single case from the Pliocene gravels of the Klondike. Meteorites appear never to have penetrated far below the surface of the earth, except possibly in the case of meteorite craters; further stony meteorites are very susceptible to weathering, with the result that the collections of the world contain only those stony meteorites that have actually been seen to fall. The number of iron meteorites in the collections of the world is of the same order of magnitude as the number of stony meteorites, but only a very small proportion of these iron meteorites have been seen

to fall, the majority of the irons in collections have been found lying on the surface, usually in desert countries such as Chili, South-West Africa, and Australia, where there are no accumulations of vegetation to hide them. Falls of irons are in fact very much rarer than those of stones.

Considering the rarity of meteoritic falls of either composition as compared with the total mass of stratigraphical deposits, and the great liability to decomposition of the commoner of these, the stony meteorites, the chances of finding fossil meteorites enclosed in geological formations appeared to the speaker to be so remote that no conclusion could be drawn from such negative evidence on the date of disruption of the celestial body from which these meteorites must have been derived.

Sir *Lewis* expressed the opinion that concerning the possible sources from which meteorites may have been derived two hypotheses are worthy of serious consideration. One hypothesis is that the solar system was formed from the disruption of a primordial dark sun, due to the close passage of a stellar body from outer space, which by tidal attraction tore off the crust of our dark sun, scattering fragments of this crust into space and exposing the still hot centre of our sun. The disturbing body then passed on and our sun regained gravitational control of its scattered crust with the formation of the planets. Many fragments have naturally remained ungarnered through the ages, and some of these continue to fall into the earth and are the source of the supply of our collections.

The other attractive hypothesis is that which ascribes the formation of the meteorites to a somewhat later date, namely the date of departure of the moon from the earth, assuming that when this happened the earth already had a solid crust. On this hypothesis the meteorites that we now receive represent samples of our earlier earth returning to us.

Each of these hypotheses necessitates the view that the primordial body, either sun or earth, had a solid crust, and enables us to assume that the stony meteorites, the mesosiderites, and the iron meteorites, represent successively deeper levels below the surface of the primordial body.

The investigation into the helium contents of meteorites may enable a choice to be made between these two hypotheses, but this will only be possible if the source of the helium contained in meteorites is known.

Mr. *Hobbs* asked whether hailstones could be termed meteorites.

Mr. *Van Manen* said that in accordance with the etymological sense the word meteor was used by the ancient Greeks for all 'things of the air', or atmospheric phenomena in general, including clouds, cyclones, typhoons, the aurora borealis, ignis fatuus, and rainbows. According to this use of the term airships may perhaps be called meteors. The word meteorite is defined in an authoritative work of reference as a mass of matter from outer space which has fallen upon the earth's surface. As hail is not formed in outer space, hailstones (nor, for the matter of that, snow flakes or drops of rain or 'rains of fishes', of which we have recently heard so much) can strictly be called meteorites.

However, an interesting quotation from Bishop Hall in Webster's *New International Dictionary* speaks of 'Hail, an ordinary meteor'. The same dictionary states that meteorite is 'loosely' used for meteor or meteoroid. Whittier had written:—

'In starry flake, and pellicle, All day the hoary meteor fell.'

The matter afforded a good example of verbal 'relativity'.

Mr. *H. Hobbs* referred to the obliquity of fall of certain meteorites and asked for further information in this respect.

Dr. *Coulson* stated that it was usual for meteorites to form small holes when they reached the earth's surface but the nature and obliquity of that hole depended upon the speed of the meteorite. He had already referred to the very great differences in velocity with which it was possible



for a meteorite that had originated in the solar system to reach the earth's surface. The cosmical velocity of meteorites was slowed up by the resistance of the earth's atmosphere. Schiaparelli had made experiments on a small ball,  $1\frac{1}{2}$  inches in diameter, of specific gravity 3.5. He had calculated that with an initial velocity of nine miles per second, the ball would have a velocity of one-third of a mile per second when it arrived at a point where the barometric pressure was one-sixty-sixth of the earth's surface atmospheric pressure; if the original velocity were 40 miles per second, then the reduction in velocity at the same point would be greater. Thus very frequently meteorites lost their cosmical velocities and fell to earth under the attraction of the earth alone and the heights from which certain meteorites had done this had been calculated by Niessl.

The direction of penetration of a meteorite is not always vertical since the direction of motion of the meteorite is sometimes tangential. Thus the largest stone of the Knyahinya fall penetrated the earth to a depth of 11 feet in a hole which was inclined to the vertical by as much as  $27^\circ$ . Smaller deviations from the vertical are common.

Mr. W. D. West referred to the fact that in the current number of *Nature*, there was a letter by Mr. M. A. R. Khan discussing the authenticity of persons ever having been killed by falling meteorites. Could Dr. Coulson throw any further light on the matter?

Dr. Coulson replied that he was unable to throw any further light on the subject but stated for the benefit of Members that the letter in question was written with reference to a review in *Nature* of Heide's 'Kleine Meteoritenkunde' in which it was stated that there is no certain evidence of any person having been killed by a falling meteorite. Mr. Khan referred amongst others to two Indian cases in 1827 and 1870 but the writer of the review concluded that unless the two cases in question are better substantiated than the others mentioned by Mr. Khan, he preferred to accept Professor Heide's statement that 'noch kein einziger, sicher beglaubigter Fall ist vorgekommen, dass ein Mensch von einem Meteoriten erschlagen oder verletzt worden ist'.

Dr. Coulson added that Members would be interested to learn that one of the cases of a near escape cited by Mr. Khan was that of a shepherd at a distance of 12 paces from whom one of the stones of the Naoki meteorite shower of the 29th September, 1928, was stated to have fallen. Dr. Coulson had described this shower in the *Records* of the Geological Survey of India.

The President said that although there appeared to be no definite record of human beings ever having been killed either by falling meteorites or by hailstones, yet there was the record in the Bible of the stones which fell down from heaven. 'And it came to pass that the Lord cast down great stones from heaven upon them.' (Joshua 10, 11.) It is evident that these stones must either have been meteorites or hailstones.

Mr. Hobbs stated that he had a cutting from a newspaper giving a record of the death of two persons from falling meteorites.

Dr. Coulson said he would like to see this report.

Mr. L. R. Fawcett drew the attention of Members to the Greek story of Aeschylus being killed by a falling turtle dropped on his head by an eagle. It might be possible that this story had reference to the fall of a meteorite.

Mr. Van Manen referred to the general Indian belief that falling coconuts never harm or kill people.

### 3. JOHAN VAN MANEN.—Some Tibetan Tankas.

Of late years increasing interest has been shown in Tibetan scroll-paintings, or *tankas*. G. de Roerich has in 1925 published a valuable monograph on the subject in which a large number of such *tankas* were reproduced. An appreciable amount of

material on the subject is now available in print. The statement made in 1925 that 'our present knowledge of Tibetan pictorial art is not sufficient to enable us to discuss various schools of art' remains true.

It is, nevertheless, possible to discuss special points which from time to time arise. The purpose of this exhibit is to draw attention to a style of painting of a very distinct character, of which the examples known to the exhibitor are of a high artistic quality. The style is in contradiction to the one of the majority of *tankas*, which are executed in a great variety of colours on the same scroll, and is limited to the use of a black background with all outlines in thin gold lines and the use of only red, or red and white, to colour clothing and skin.

A few samples are exhibited, showing various stages of development, and for purposes of comparison samples of the more common type of *tanka* are placed in juxtaposition.

Mr. Van Manen said that though all present would probably have seen many tankas, they might not realize how scanty detailed knowledge was on the subject of this fascinating kind of Tibetan art. Safe canons for dating had not yet been evolved and this particular branch of enquiry was complicated. Presumable age was often a matter of appearance. Tibetans scarcely ever date their tankas, but the Nepalese very often date theirs. From such dates it was apparent that the freshness of a tanka was greatly influenced by the manner of its preservation. Copies that looked recent might have dates going back as much as three or four centuries, simply because they had been carefully preserved. Other specimens might appear old though their dates showed their newness, again simply because they had been carelessly kept and roughly handled. Ritual fumigation was an important element in this matter. Though it was true that in modern times stereotyped models had been and were being reproduced as copies, recognizable by crudeness of colouring and uncertainty of outline, it was equally evident that there are many bad old pictures as well as good new ones. A similar uncertainty existed with reference to schools. Though different types may be recognized the time for classification has not yet come. The speaker would however suggest that at least one broad division may already be made, however general such a division would have to remain for the present. He thought there was a definite difference between what he would call the Indo-Tibetan style and the Sino-Tibetan style. A curious observation which he has made was that a small number of tankas which he had seen looked almost Japano-Tibetan. He would however not enter into that matter. Quite apart from date or school there is a division according to manner. In his own collection he had a few specimens of an entirely rare kind, more or less modernistic, and executed in a crayon-like manner. His subject for the evening was limited to a class of paintings described in the introductory paragraph on the programme. He had the impression that these specimens must be old, an opinion, endorsed, for what it may be worth, by his Tibetan friends. The outlines were well-finished and delicate. There was a sureness of touch of remarkable vigour and skill. The devils were ugly, but they were meant to be ugly. The accessory figures showed graceful delicacy: miniatures of high quality. He had enquired whether this type of painting might be related to a particular sect, and specially whether it might perhaps be reserved for Tantric representations. He was told that this was not the case. He would leave the matter there and invited the audience to inspect the tankas in detail.

Mr. Percy Brown remarked :—

As to the age and other particulars of the Tibetan Temple Banners or Tangkas, as these have been prepared for centuries almost always according to the same conventions and traditions, it is difficult to classify them into any reliable periods. Some of the tangkas recovered by Sir Aurel Stein from sites in Eastern Turkestan and known to date from 8th, 9th and 10th centuries A.D. differ very little in subject-matter and technique from those prepared at the present time. Appearance and condition is also an unreliable guide, as some tangkas exposed on the walls of the *gompas* speedily take on a deposit of smoke and look very old, while others carefully rolled up retain their fresh colouring for a long period.

It is doubtful whether much help in classifying and dating these banners can be expected from the monasteries, as these institutions have little reliable knowledge on the subject, although occasionally some valuable and intelligent information is forthcoming from these sources. It is more likely that a beginning will come from India, either through inscriptional evidence or by comparing the technique of these tangkas with that of some of the Indian schools of painting. Once a fixed point is indicated and a start made some progress may be anticipated, but at present any dating of these is very largely speculation.



## DECEMBER, 1935.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 2nd, at 5-30 P.M.

### PRESENT.

SIR LEWIS FERMOR, Kt., O.B.E., D.Sc., A.R.S.M., F.G.S., M.INST.M.M., F.R.S., F.A.S.B., President, in the Chair.

#### Members :

Agharkar, Dr. S. P.  
Auden, Mr. J. B.  
Bogdanov, Mr. L.  
Brahmachari, Sir U. N.  
Brandt, Dr. A. Klebe  
Brown, Mr. Percy  
Chanda, R.B. B.  
Chakrabarti, Mr. S. K.  
Chatterjee, Mr. P. P.  
Chatterji, Dr. S. K.  
Coulson, Dr. A. L.  
Darbari, Mr. M. D.  
Dey, Mr. Mukul  
Driver, Mr. D. C.

Dutt, Mr. M. N.  
Gangoly, Mr. O. C.  
Haq, Mr. M. Mahfuz-ul  
Heron, Dr. A. M.  
Hobbs, Mr. H.  
Hora, Dr. S. L.  
Majumdar, Mr. N. G.  
Manen, Mr. Johan van  
Neogi, Dr. P.  
Olpadvala, Mr. E. S.  
Prashad, Dr. Baini  
Rao, Mr. U. S.  
Stagg, Lt.-Col. M.  
West, Mr. W. D.

#### Visitors :

Brown, Mrs. Percy  
Fermor, Lady

Pulley, Lt.-Col. O. C.  
Sarkar, Sir Jadunath

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of six presentations of books, etc., which had been placed on the table for inspection.

The General Secretary announced that the following candidate would be balloted for as an Ordinary Member :—

(29) *Blakiston, J. F.*, Director-General of Archaeology, New Delhi.

Proposer : Sir Lewis Fermor.

Seconder : A. M. Heron.

The General Secretary reported the death of :

Dr. H. F. Osborn (An Anniversary Centenary Member, 1934).

Dr. Bains Prashad read an obituary notice of Dr. Osborn (see page 221).

The General Secretary reported the following loss of membership, since the previous meeting, by death :—

(13) F. Williamson (An Ordinary Member, 1934).

The General Secretary reported the following loss of membership, since the previous meeting, by resignation :—

(20) Karmajogi Ray (An Ordinary Member, 1934).

The General Secretary reported that there had been no lapses of election, since the previous meeting, under Rule 9.

The General Secretary reported that there had been no withdrawals of application, since the previous meeting.

In accordance with Rule 48(a), the General Secretary reported that the Council had adopted certain Regulations regarding the award of the Indian Science Congress, Calcutta Prize, last year, which had not been announced in the Monthly Meeting as usual.

The Regulations are as follows :—

REGULATIONS REGARDING THE AWARD OF THE INDIAN SCIENCE  
CONGRESS CALCUTTA MEDAL.

- (1) The Medal shall ordinarily be awarded at the Ordinary Annual Meeting of the Asiatic Society of Bengal, in February, in such years as the session of the Congress is held in Calcutta.
- (2) The Medal shall be bestowed on a person who, in the opinion of the Council, has rendered conspicuously important services to the Indian Science Congress, or on a Member of the Indian Science Congress who, in the opinion of the Council, has made conspicuously important contributions to science.
- (3) In any year preceding one in which the award will be due the Council shall, at a meeting preceding the Ordinary Monthly Meeting in November, appoint an Advisory Board consisting of not less than Five Members.
- (4) The Advisory Board shall be termed 'The Indian Science Congress Calcutta Medal Advisory Board'. This Board shall include the Biology, Physical Science, Anthropology, Medical and General Secretaries. The Board shall appoint a Chairman from amongst its members who shall have a casting vote (in addition to his own vote) in the event of the number of votes being equally divided.
- (5) The General Secretary shall call a meeting of the Advisory Board on the first convenient date subsequent to the first Monday of December, at the same time requesting members to bring with them to the meeting detailed statements of the

work or attainments of such candidates as they may wish to propose. The General Secretary shall also place before the Board for consideration detailed statements of the work or attainments of any other candidate submitted by any Fellow of the Society. The Board shall make such arrangements as may be necessary for the selection of a name to be submitted to the Council at its December meeting.

- (6) The Advisory Board shall submit to the Council the name of the person to whom, in the Board's opinion, the Medal should be awarded. It shall be open to the Board to report to the Council that no award should be made for the year; and, in such case, provided the Council concurs, a new Advisory Board shall be constituted in the following year, and so on, from year to year, in the manner prescribed above, till recommendation is made for an award and accepted by the Council. The period mentioned in Regulation (1) shall always be counted from the year of the award.

Papers were presented, and Exhibits were shown and commented upon, as detailed below.

The Chairman announced the result of the ballot for the election of the Ordinary Member and declared that the candidate has been duly elected.

The Chairman announced that a meeting of the Medical Section had been arranged to be held on Tuesday, the 17th December, at 6 P.M.

The following papers were presented :—

1. N. L. BOB.—*The Oath among the Dashtas.*

Introductory note on the locality, history, and characteristics of the Dashtas.

The psychological background. The sorcerer and his stock-in-trade.

The sorcerer's implements and materials. The association of ideas connected with them. The sacrificial post.

Two classes of oaths: of ultimate and immediate results.

Ordeals by boiling water and hot iron. Record of cases observed.

Detailed descriptions of the oath on the tiger's tooth, the oath followed by an ordeal by boiling water, the oath followed by an ordeal by red-hot iron, and the 'death'-oath.

In the absence of the author Rai Bahadur R. Chanda presented the paper, giving an abstract of its contents. He said that the paper was well-written and contained valuable information. He had to draw the attention of his hearers to one remarkable aspect of the paper. The author reported some strange cases of ordeals, one by boiling water, and two others where death followed after the taking of a false oath. The last two might be attributed to natural cases, but the ordeal by fire was incredible. He doubted whether the author took proper steps beforehand to prevent deception. The hand of the subject should have been examined before he was allowed to dip it into boiling water, and again when he took it out. Such records were certainly of value but should be critically examined. The speaker referred to the well-known dry-rice ordeal prevalent throughout India, based on the fact that a nervous condition of the subject prevented normal salivation.

Sir *Lewis Fermor* remarked that a rational scientific explanation was possible of the case of a person undergoing successfully the ordeal of plunging his hand into boiling water or oil or molten lead. All that was necessary was for the hand, prior to immersion, to be coated with some substance that on volatilization would produce a protecting covering of vapour round the hand so as to prevent the boiling or molten liquid from coming in actual contact with the hand. This was the basis of the well-known *Leidenfrosts* phenomenon, in which a liquid in the spheroidal state is supported on a cushion of its own vapour.

He might claim to have undergone ordeal by liquid oxygen, when at College a drop of liquid oxygen was poured into the palm of his hand. The temperature of this liquid oxygen was, of course, nearly 200° below zero centigrade, and had the liquid come in contact with his hand, it would have produced a very severe burn. The secret of surviving such ordeals satisfactorily was to make their duration as short as possible and to remove the hand before the protecting cushion of vapour had disappeared and thus permitted the cold or hot liquid actually to make contact with the hand.

Mr. *Van Manen* said that he considered the word incredible too strong an expression, indicating a prejudgment. Though caution and discrimination were always desirable they should not extend to a *priori* scepticism. The subject of ordeals had an extensive history. Natural explanations of strange observations had often been plausibly given. He remembered a discussion on ordeals by liquid resin in the Dutch East Indies in which it was suggested that the richer of the parties concerned bribed the officiating priest to furnish resin with a lower melting point than to his poorer rival. Other fire ordeals had been explained by a previous coating with alun invisible to superficial observation. On the other hand there were records of such strange phenomena as stigmata, immunity to pain in a hypnotic condition, hypnotic rigidity, and so on, and the whole range of instances of susceptibility to suggestion amongst primitive races, self-induced or otherwise. One should carefully refrain from dogmatic scepticism. If a careful and unsuspected observer gave a detailed record of observations in the field, closet-students in the city should not immediately lay down what can and cannot be. We should remember the gibe in Goethe's *Faust* where *Mephistopheles* says: —

Daran erkenn' ich den gelehrten Herrn !

Was ihr nicht tastet, steht euch meilenfern ;

Was ihr nicht fasst, das fehlt euch ganz und gar ;

Was ihr nicht rechnet, glaubt ihr, sei nicht wahr ;

Was ihr nicht wägt, hat für euch kein Gewicht ;

Was ihr nicht münzt, das, meint ihr, gelte nicht.

It was better to listen, and to file provisionally for reference, until sufficient data for analysis and judgment should be available, than to judge prematurely. As far as the reported cases of death were concerned, there existed ample testimony concerning remarkable cases, amongst nature people, of a power to 'give up the hold on life', of people simply determining not to continue living and duly dying in consequence. *Bodding* has an interesting passage on this subject in his *The Santals and Disease*, p. 8.

Prof. *P. Neogi* said that ordeals have psychological bearings. The well-known 'rice' ordeal is based on the psychological difference in the culprit and the innocent person causing the secretion of different quantities of saliva. The result would be that the rice coming out of the mouth of the culprit would be dry, as he would be so frightened out of his wits as not to secrete any saliva, whilst the innocent person would secrete a sufficient amount to moisten the rice.

In the case of the 'boiling water' ordeal mentioned in the paper the culprit would be afraid to put his hand into the water. The innocent

man would keep his hand perhaps too long in it in order to prove his innocence and hence might get his hand scalded.

Mr. U. Shanker Rao drew attention to the recently reported fire-walking test made in London. Pictures had appeared in the *Daily Mirror* and other illustrated papers. The subject had been discussed in one of the recent numbers of *Nature*. The speaker registered his disagreement with the attitude of Rai Bahadur R. P. Chanda.

Dr. Bains Prashad remarked that Mr. Bor's observations were of value as records of oaths, and were not submitted as critical studies on or explanations of the ordeals undergone by the Daffas in connection with oaths on special occasions.

Mr. P. P. Chatterjee said :—

Compurgation and ordeals—such as putting the hands into boiling water, walking on red-hot iron, etc.—are spoken of as prevalent among the Druids in old Britain. In India also such ordeals were common in ancient days. Fire ordeals are sometimes explained by the suggestion that at a certain very high temperature the hand will not, in accordance with some law of thermo-dynamics, be injured or equally so through some psychological factor in accordance with the law of dominant mental impression. Either the phenomenon is the result of the operation of some law of thermo-dynamics, or due to the action of the law of dominant mental impression on the subconscious mind, a subject for the experts in psychology or calorimetry. In his remarks the speaker had assumed it to be a fact that innocent persons had in many cases come out of the ordeals unhurt, as history had recorded such cases; otherwise trial by compurgation or ordeal would not have remained prevalent for so long a time.

Mr. Chanda replying to the various speakers said that he had no quarrel with them in so far as they pleaded for the open mind. On the other hand openmindedness should not do away with a critical and scientific spirit. Caution should not go to the other extreme of credulity. He wished to make it clear that what he had said had not been intended in a spirit of prejudgment. All present would admit that the subject of ordeals was a mysterious one, as well as an interesting one, and that Mr. Bor had given a valuable description but no definite explanation.

Sir Lewis Fermor remarked that the aim of the paper was not to elicit a general discussion on the subject of judgments by ordeals and suggested that if no one had any further remarks to submit regarding the oaths of primitive people in general or of the Daffas in particular the meeting might now pass on to the next paper.

## 2. M. DHARMARAJAN.—*Anatomy of Otolithus ruber* (Bl. & Schn.). Part I. *Endoskeleton*.

Among the students of Zoology in the South Indian colleges, there has been a long-felt need for a suitable work dealing with the anatomy of a local Teleostean fish. With a view to supplying this demand the author has chosen *Otolithus ruber*, a large and edible species of Sciaenid fish, common throughout the Coromandel Coast, and in this paper a complete account of its endoskeleton is given. Detailed descriptions of all the principal sections of the axial and appendicular skeleton are given with illustrations.

In the absence of the author Dr. S. L. Hora communicated the gist of the paper and remarked that a subject of this nature does not lend itself to being read out in detail. The material is only useful to those who study this species of fish, as a type, in South Indian Universities, or to specialists who may use the data so laboriously collected by the author for purposes of a comparative study of fish skeletons. Last

year the Society had published a similar paper on the skeleton of Rohu (*Labeo rohita*) for the benefit of Northern Indian Universities, and in publishing the present paper the Society would be helping the Universities in the South. The students of zoology in India had hitherto been studying European types and had consequently considerable difficulties in obtaining the necessary material in a proper state of preservation. Within the last decade several valuable memoirs had appeared on Indian types and the teachers and students were finding them very useful. The present paper would be a valuable addition to suchlike memoirs and it was hoped that the author would not delay the publication of an account of the soft parts to complete the memoir.

The following exhibits were shown and commented upon :—

1. SIR LEWIS FERMOR.—*An Iron Horse from the Central Provinces.*

This exhibit was obtained some 32 years ago from the top of a hill of manganese-ore in the Chhindwara district. The manganese-ore cropped out in large black masses, which in one place had been daubed with red paint and treated as a village god. Lying about were a number of clay horses and an iron one. This hill has since been worked as a manganese mine, and is now represented by a large hole in the ground.

The interest of this specimen is perhaps three-fold. In the first place it has been exposed to the moist air of Calcutta for over 31 years, without any appearance of rust, from which one can deduce that it is made of very pure iron, as in the case of the iron pillar at Delhi. Its age, of course, is unknown.

The second point of interest is that it must be regarded as an example of primitive art. It is made mainly from three pieces of iron—one piece forming the head, the body and the tail, another piece the front pair of legs, and a third piece the hind pair. The way in which the pairs of legs are bent over the body provides a representation of a saddle. In addition, there are two extra small pieces of iron welded on to form the ears. Two touches of vermilion on the head suggest the eyes. The horse is so constructed as to be unstable when standing on its four feet, but to be stable standing on a tripod consisting of its hind legs and tail. It is a little over 7 inches long, and is in consequence less than one hand high !

I have shown this horse on occasion to many people, and no one appears to have seen a similar horse before, but—and this is the third point of interest—it has been suggested to me that it should be compared with the horses that are offered to the Southern Indian village deity known as Iyenar—a beneficent male deity, who is regarded as the village watchman and whose duty is to patrol the village and fields at night. If this suggestion is correct, it is an indication of the extension of this South Indian deity as far north as the Chhindwara district in the Central Provinces. An account of Iyenar is given in Bishop Whitehead's 'Village Gods of Southern India'. These village



gods, according to Bishop Whitehead, date from before the Aryan invasion and must be regarded as Dravidian deities. The Gonds of the Central Provinces are, of course, Dravidians, and it is not, therefore, surprising that worship of this deity Iyenar may have extended to the Central Provinces. I was not, however, given any name for the deity, and have no knowledge whether there is any local name for Iyenar in the Central Provinces.

After showing his exhibit and explaining it in the terms of the description given in the meeting notice, Sir Lewis Fermor invited Professor P. Neogi, as an authority on the subject of iron in ancient India, to contribute to the discussion.

Professor Neogi said:—

As regards the iron in the horse it is to be remembered that after the Neolithic age Northern India had a copper age and Southern India an iron age so far as implements are concerned. All iron, beginning with the iron pillar at Delhi to the iron pillars at Dhor and Mount Abu, the girders of Puri, Bhubaneswar, and Konarak, down to the Mughul cannons, has been found on analysis to be pure wrought iron. Therefore, without analysis it can safely be said that the iron of the horse now exhibited is pure wrought iron.

As regards the ethnological importance of the exhibit, it is rather remarkable that Aryan mythology has many animals as the mounts of Aryan gods and goddesses, such as the lion, the peacock, the eagle, the elephant, and even the mouse, but not the horse (except perhaps as a duplicate mount of Indra, and as connected with the sun-god with seven horses to his chariot). The iron horse therefore may be of Dravidian and not of Aryan origin. The primitive nature of the workmanship of the horse points perhaps to a prehistoric age and if that should be proven to be actually the case the exhibit would be an important one in the history of iron in ancient India.

Mr. U. S. Rao remarked:—

A point of particular interest, specially to naval architects and marine engineers, is whether this metal has been rested by immersing in salt water and examined as to whether it would remain clean without the appearance of rust. If it were possible to manufacture this metal so that it should not rust even in contact with salt water it would probably revolutionize ship building.

Mr. Percy Brown remarked:—

With regard to the statement in Sir Lewis Fermor's note that 'lying about were a number of clay-horses', Mr. Percy Brown observed that on more than one occasion in the Punjab his attention had been called to a collection of small terra-cotta models of horses forming a mound near a shrine. These ranged from a mass of old and disintegrated examples in the centre of the pile to a number of perfect specimens on the fringes which had apparently only recently been added. In answer to his enquiry he was told that a saint, or *fakir* was buried on the spot, who during his lifetime had shown an exceptional fondness for horses, an explanation which however he did not consider altogether satisfying.

As to the particular horse exhibited by Sir Lewis, he noticed that its true pose was evidently rampant, and that that posture was always the one represented in the seven coursers of *Sūrya*. He therefore raised the question as to whether this iron example was not one of the steeds of the Sun God, indicating that the mount was associated with Sun-worship.

In any case a most interesting fact connected with this particular specimen was its artistic character, for as a type of primitive art, it was in a class by itself. In view of the cult in Europe for works of this nature, of primitive and elemental art often of vast antiquity, he thought that if it were exhibited there it would create no little sensation.

Mr. *Van Manen* referred to the custom amongst the Bhils of making offerings of rude images of horses. It had been suggested that these horse-images may be intended as steeds on which the spirits of the dead may ride to heaven. The Koravas believe that after death a good man's spirit may enter the body of a horse, a cow, or some other higher animal. In Gujrat the worship of Ghora Dev, the horse-god, is common, and clay images of horses are placed round a central shrine. The Gonds likewise have a Ghor Deo, or horse-god, also named Koda Pen.

With reference to the South Indian horses, striking figures, often of considerable dimensions, standing in little groups in fields on the outskirts of villages, he would indulge in a curious speculation. He recalled a story in the *Arabian Nights*, which he for the moment could not locate again, speaking of such horses, petrified during the day and coming to life in the night. He wondered whether this story had its origin in the South Indian custom.

Though not strictly relevant to the topic under discussion he would like to mention that Mr. Chintaharan Chakravarti had told him that a story regarding Urvaśī being transformed into a horse by day, resuming her own shape by night, occurs in the *Dandī-parva*, a well-known old Bengali composition. The Kinnaras have horse-faces (*turaṅga-vadana*). In the ritual literature of Bengal a number of old Bengali MSS. refer to a deity called Trailokyadeva or Trailokya Pir who rides on a golden horse with a silver saddle. A hymn attributed to Śaṅkarācārya mentions horses and horse-borne chariots among the 64 objects offered to the supreme goddess, Śakti.

The place of the horse in Indian folklore, mythology and superstition was an interesting subject of study. We lacked for India a treatment similar to that under the word Horse (Pferd), and its combinations, in the magnificent German cyclopædia of German superstition. He would however draw attention to Van Gulik's recent monograph on *Hayagrīva : the Mantrāyanic Aspect of the horse-cult in China and Japan*, Leiden, 1935.

Sir *Lewis Fermor* observed that his horse was not a god to whom offerings were made, but the offering itself.

Mr. *Mukul Dey* said :—

All Indian potters of to-day still make clay horses for the Goddess Śītalā, who rides on a donkey. People supplicate Śītalā against small-pox, cholera and other diseases. In every village one may find such horses, and in some cases elephants, lying under trees, where the villagers come to worship them periodically.

Dr. *Suniti Kumar Chatterji* said :—

The cult of the horse is an old one in India. In the *Rg-Veda* we have already *Dadhikrāvan*, a divine horse, a form of *Agni*, the fire god. Even at the present day it prevails all over India, and it forms part of the popular religion, Hindu or Musalman. The shrines of Muhammadan *Pirs* or Saints usually have crude terra-cotta horses as votive offerings, heaps of these sometimes being found near popular shrines. Actually some of these *Pirs* are known as *Ghorā-Pirs* or Horse Saints from these offerings. No one can tell why figures of horses are offered to Musalman *Pirs* : but this would seem to be merely a survival in popular Islam of an older cult replaced by it, at least outwardly. The old gods never die, or are at least very hard in dying. Probably a horse-cult was known in Pre-Aryan India, and it has continued down to our day. Images

of horses are offered also to some Hindu temples, particularly in West Bengal. In the Bankura district, figures of terra-cotta horses, and sometimes of elephants, are dedicated to the deity known as *Dharma*. This *Dharma* cult, as the late MM. Haraprasad Shastri showed, is a survival of popular Buddhism within popular Hinduism (Brahmanism). The shapes of these West Bengal horses have some resemblance to those in the Dravidian country and they are sometimes quite as big as in the south. Islam in India replaced Buddhism and Brahmanism, and in the process took over a great deal from these cults; clay horses in shrines, whatever they mean, are a survival of primitive popular religion through Buddhism-Brahmanism and Islam.

The iron horse exhibited by Sir Lewis Fermor may be or may not be connected with the horse cult. It may be questioned whether it is really pre-historic. It does not look to be a horse rampant, but it is meant to stand on its four legs. Stylistically its shape reminds me of the horse in Northern European Art—for instance in Celtic copies of Greek coins, and in Early Germanic Art. Then, again, from its shape, one may ask whether it is a cult figure, or an ornamental one, or merely a horse's bit in the shape of a horse. Similarly figures forming decorative horse gear have been found elsewhere. At any rate, the figure is remarkable from many aspects—metallurgical, religious, mythological, and ethnological, and deserves careful scrutiny by specialists.

Sir Lewis Fermor, in reply to the discussion, thanked the members present for the interest they had taken in his little exhibit. With reference to the various points raised, he wished to emphasize that the specimen had been in Calcutta for 31 years without rusting, and that no special care had been taken to prevent this. Also it was necessary to emphasize that this horse was one of a group of horses that had been offerings to a local deity. There was no chance of the specimen being merely a horse's bit as suggested by Dr. Chatterji, unless all the clay horses at the same spot could be so regarded. As regards the stance of the horse, it seemed undoubtedly to be rampant as it stood very securely upon its hind legs and tail, and was very unstable on four legs, one of which actually does not touch the ground.

## 2. PERCY BROWN.—*Miniature Painting of a Mughal Prince.*

This portrait, which was acquired in Kashmir some years ago, has been identified as Prince Dara Shikoh, eldest son of the Emperor Shah Jahan (1627–58). There are authentic portraits of this prince to which this miniature bears a strong resemblance. The portrait is rather larger in scale than the usual Mughal miniature as the face itself measures over 3 inches in length.

The miniature is an excellent example of the style of painting which prevailed at the Mughal Court towards the middle of the 17th century, and is most probably a contemporary portrait taken from life. It is representative of the Mughal School when it had just passed its meridian under the Emperor Jahangir (1605–27), but in spite of this it is a significant work of art. It has every proof of being a good likeness, and its outlines are drawn with that dexterity that the best artists of the time invariably possessed. There is realism in every brush form, nothing is suggested, all is clear and distinctive, even to the slight degree of shading which was beginning to appear in the art at this time.

The subject of this portrait had a tragic career. We see him as a youth in a magnificent miniature of a scene preserved in the Bodleian Library at Oxford, where his father sits in Durbar surrounded by the members of his Court, Dara Shikoh and his younger brother Shuja attended by their tutor standing in respectful attitudes before the throne. Again he bestrides a prancing horse in true cavalier style in a picture in the Indian Museum, Calcutta. Later, however, Dara became the object of his younger brother Aurangzebe's intrigues which finally ended in his death, by which undoubtedly the Mughal dynasty lost a very promising member. Dara Shikoh possessed that interest in the arts which is the hall-mark of his family, and in the India Office Library there is a very precious album of pictures collected by this prince and bearing his name. History, and in any case the art history of Hindustan, might have taken a very different course had destiny allowed Dara Shikoh to succeed his father Shah Jahan.

One point about this miniature has a special interest. Towards the upper margin, in somewhat faint lettering, there is inscribed in Hindi characters what is presumed to be the name of the artist, Hunhar. There are several examples of miniature painting attributed to this artist among the collections of this school, and he appears to have been one of the leading painters at the Court of Shah Jahan. Except for these products of his brush little else is known of this Mughal painter.

Mr. Percy Brown remarked :—

This miniature, although found in Kashmir, was clearly not a production of the artists of that State, but an example of the Mughal *kalm*, as this art was practised by the painters at the court of Delhi towards the middle of the 17th century. It is no doubt a contemporary portrait of the Prince, of whose features a small 'thumb-nail' sketch would be made from life, and the picture worked up with great care and elaboration from this original impression. It is an exquisite example of the marvellous dexterity of brush-form and line-work attained by the exponents of this school, the outline of the profile being drawn with a sure and sensitive touch, while the eyes and ears are admirably rendered. Yet with all these qualities it did not represent the art quite at its best period, there is a stiffness and a slightly stylized appearance in the miniature as a whole, indicating the first symptoms of the decline.

The subject of this portrait lived his last few years in an atmosphere of tragedy, when, relentlessly pursued by his brother Aurangzebe, he was forced to take refuge in the trackless wastes of Sind, where several of his family died of heat and thirst. Eventually he was taken prisoner and executed. There are no indications of these troubles on the face in the portrait which bears a calm and serene expression, so that the sketch was obviously taken before these events began to cloud his short life.

With reference to the album of some 40 pictures inscribed with this Prince's name, and now preserved in the India Office Library in London, these show that Dara Shikoh had an intelligent taste in art but that he was also catholic in his views, as this *muraqqa* contains besides Indian miniatures several European engravings including one depicting 'St. Catherine of Siena' bearing its own date of A.D. 1585. Something of the mantle of his great grandfather, the Emperor Akbar, seems to have

fallen on this young man and inspired him to form such a collection of pictorial art.

Mr. O. C. Gangoly enquired of Mr. Brown if he had sufficient data to establish the identity of the portrait. So far as the speaker knew there are three portraits said to represent Dara Shikoh—one in the Louvre museum, another in a German collection, and the third in the Boston museum. It would be useful to compare these portraits in order to consider the authenticity of Mr. Brown's exhibit.

Mr. Van Manen said that a happy coincidence enabled him to reply to Mr. Gangoly's question. Dr. Hermann Goetz, at present resident in the Hague, had recently published an extremely detailed and valuable article on one of the sources for Nicolaas Witsen's work on North and East Tartary. Dr. Goetz had been so kind as to present to the Society's library a reprint of this article, which had originally appeared in the Dutch *Tydschrift voor Geschiedenis*, Volume 50, No. 3, page 241. From this article it appears that the State collection of prints in Amsterdam possesses an album containing 49 miniatures of Indian Emperors, Princes and Dignitaries. This album is traced back to the possession of Nicolaas Witsen, the famous burgomaster of Amsterdam, who after his voyage to Moscow in 1664 commenced collecting materials for his big book on Tartary. The writer adds that it is even possible that this album may have originally belonged to Rembrandt. He comes to the conclusion that the album originated between March and September, 1686. He further shows that as far as is known at present, Holland was the first country to begin collecting specimens of Indian art on a large scale. Dr. Goetz further established the fact that fully 250 years ago extensive collections of Indian miniatures had been imported into Holland direct from India. Now, during 1724–1726 François Valentyn (1666–1727) published his enormous work on *The New and Old East Indies*. In the second part of the 4th volume he deals with the lives of the Great Moghuls, profusely illustrated with steel engravings, evidently based on Indian originals. On page 255 there is found a portrait of Dara Shikoh (spelled by him as 'Dara Sjecoer'). The speaker would pass round the illustration for comparison with Mr. Brown's exhibit and it would be found that both portraits were undoubtedly identical. Valentyn began the writing of his work shortly after 1714, less than 60 years after Dara Shikoh's death. The various dates just now enumerated furnish a strong argument for the probability that the existence of a portrait, published in Holland in the year 1726 and described as that of Dara Shikoh, enables us to establish the authenticity of an identical portrait purchased a few years ago in Kashmir. Is it possible to suggest that the Kashmiri portrait (which has been identified as a portrait of Dara Shikoh) may have been derived from the old Dutch publication?

Mr. Mukul Dey observed that the inscription on the portrait giving the name of its painter was undoubtedly in a very recent hand so that it was therefore improbable that the portrait could be even remotely contemporaneous with its subject.

Mr. Van Manen replied that it is a well-known fact that Indian sellers of antiquities often write identifications, attributions or dates on pictures and manuscripts. Lateness of such an inscription is no proof whatsoever of the age of the object itself.

### 3. M. MAHFUZ-UL HAQ.—*A note on a rare MS. of al-Aghrād-al-Tibbiya (an encyclopædia of medical science).*

On account of the lateness of the hour this exhibit was postponed to the next meeting.

## OBITUARY NOTICES.

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REV. FR. H. HOSTEN, S.J.

(1873-1935.)

The relations between the two great academical institutions of Park Street, St. Xavier's College and the Royal Asiatic Society of Bengal, have been varied and intimate. For the last seventy years at least the Society has always had one or other of the Jesuit Fathers amongst its Associate Members. From 1897 to 1899, Archbishop P. Goethals, S.J., was a Vice-President of the Society. The contributions of the learned Fathers to the Society's publications have been many and important. Amongst the most prolific of such writers was the late Fr. Henri Hosten, S.J., who died in Brussels on the 16th of April, 1935, in the 63rd year of his life. Father Hosten had been an Associate Member of the R.A.S.B. for a quarter of a century, having been elected as such in December, 1910. An indefatigable worker, he contributed 36 papers to the Society's *Journal* and 2 to its *Memoirs*, besides leaving behind the MSS. of a number of papers for subsequent publication.

Father Hosten was decidedly a 'character', described by one of his colleagues as to the end of his life 'un grand enfant'. His devotion to antiquarian research knew no bounds; perhaps sometimes went beyond them. He was of a simple, friendly, guileless character, yet not without explosive matter in his make up. In polemics his whole-hearted zeal sometimes made him hit harder than he perhaps intended or really wished and never with lasting rancour. One of his own colleagues once said when about to deliver a lecture: 'Keep Father Hosten at home. I do not want him to pick holes in my lecture'. He had what the Belgians call 'een strijdbare ader', a combative vein, within him. Nevertheless, this side had practically only the effect of accentuating his winning qualities. As a result he was a much-beloved man wherever he went, be it as priest or scholar. Innumerable anecdotes are being told about him; how a high-placed lady once visited the College and was received by him as what she described 'un Jésuite en négligé'; or how he was so enthusiastic in teaching Latin that his pupils would actually come to blows over a point of Latin syntax; and in the archives of our own Society there are records of some whirlwinds raised by him in connection with his publications.

None of these things, however, could diminish the respect and affection which he inspired.

He was born at Ramscapelle in Belgium, on March 26th, 1873. He entered the Society of Jesus in September, 1891. In his youth he was suspected of being a consumptive and in 1893 came out to the East, to Kandy in Ceylon, with an expectation of only three more months of life. He took part there in the foundation of the Papal Seminary and began teaching with a dozen pupils. Instead of dying, he flourished. In 1906 he was ordained a priest in Kurseong.

In the meantime, before coming North, Father Hosten had already begun to study the dolmens, cromlechs and pottery of South India when being stationed at Shembaganur, near Kodaikanal. It was then also that he began his autodidactic studies of Portuguese. Soon after he was transferred to the Calcutta Archdiocese where he laboured for 29 years. When stationed in Kurseong he founded there together with the Fathers A. Wouters and P. Feron an Indian Academy.

Soon Father Hosten made himself thoroughly familiar with the Spanish, Portuguese and Italian of early missionary reports. The Latin and French were already there from the beginning. These documents became his passion; their study and publication his life-work. His powers of application were of a very high order and his typewriter was a singularly hard-worked instrument. His manuscripts, single-spaced, with the accents and corrections in the finest, microscopic, spidery writing, were marvels.

Father Hosten published anywhere and everywhere, wherever an opportunity was found; in newspapers, popular magazines, academic journals and as separate publications.

His most substantial publication perhaps was that of the memoirs of Monserrate concerning his mission to the court of Akbar, published in this Society's *Memoirs*. But his total output was exceptionally varied and numerous. The Goethals Library Catalogue contains 72 entries of works by his hand. We are informed that the Library of the Indian Academy at Kurseong contains 40 manuscript volumes prepared by him and containing partly unpublished MS. material, whilst some similar material is preserved in the St. Xavier's Library in Calcutta.

Father Hosten has from the very beginning been not only a digger-up, collector and editor of his documents, but always a most generous helper to others. He co-operated largely in the production of the History of the Bengal Mission by H. Josson, S.J., and in a recent volume on *The Jesuits and the great Moghul*, its author, Sir Edward Maclagan, pays a glowing tribute to Father Hosten on whose various publications the work in so far as regards information not already available in 1896, is largely based.

Father Hosten retired from Bengal to Europe in 1931 on account of ill-health. In his native Flanders, whenever his

doctors did not forbid it, he continued searching for documents and keeping up a busy correspondence with scholars.

His death came suddenly and unexpectedly.

The writer of this notice, who had many occasions to come in close contact with this loveable and dignified priest and scholar, can only voice the universal sense of loss caused by his death. In this Society his name will be long held in honour. R.I.P.

JOHAN VAN MANEN.

SYLVAIN LÉVI.

(1863-1935.)

Sylvain Lévi belonged to the giants. The *Encyclopædia Britannica* described him in 1929 as follows:—

‘French orientalist born in Paris on March 28th, 1863. Educated at the University of Paris. In 1886 he was appointed a lecturer at the school of higher studies in Paris. As special lecturer in Sanskrit he taught at the faculty of letters from 1889 to 1894 when he was appointed to a professorship at the College de France. In 1897 and 1898 he made tours of scientific research in India and Japan, and from 1921 to 1923 he travelled in India, Indo-China, Japan, Korea, Siberia and Russia. Prof. Lévi became a director at the school of higher studies and a member of numerous societies, including the Royal Asiatic Society, the Linguistic Society and the Society of Jewish Studies.’

The remaining years may be as briefly summarized as follows:—

In 1926 he left for Japan, for a third time, and there laid the foundation of a Research Institute called the *Maison Franco-Japonaise*. In 1928 he returned and visited India again, also for the third time, as well as Java and Bali. In the same year he founded the *Institut de Civilisation Indienne* in Paris, in connection with the University.

In October 1928 he was back in Paris where the remaining years of his life were spent in great literary productiveness. On the 30th of October 1935 a sudden death, without suffering or previous illness, put an end to his laborious life.

It cannot be our intention in this note to recount in detail, still less to discuss or appreciate, Lévi's scholarship. Eloquent and ample descriptions of his life-work have been given in many places. The *Journal Asiatique* for January-March, 1936, contains a detailed monograph by L. Renou on his scholarly record.



The *Bulletin de la Maison Franco-Japonaise* of Tokyo, for 1936, completes the data in four separate articles. His pupil P. C. Bagchi has published a bibliography of 139 titles of works from his hand in the 12th volume of *The Indian Historical Quarterly*. Elsewhere, in many places, due honour has been paid to his memory. It has been said that, however great a linguist he was, a Master of Sanskrit, Chinese and many old and modern Indian dialects, he was primarily an historian. But that is thinking of him as the scholar. Here we will speak chiefly of the human side of this Honorary Fellow (since 1920) of the Royal Asiatic Society of Bengal. In him the great scholarship never dimmed the great humanity. He was a great bookman but in no sense a bookish man. He was learned but never arid. He was a great classicist but intensely aware of the actual current of life. Of nervous activity, he was a great organizer. He held the secret of converting his many pupils into admirers and friends and of communicating some of his own zeal to them. A typical anecdote is told by Bagchi: 'His house was always open to receive Indian students, and those who have come in contact with him cannot forget the great qualities of his heart. Amongst manifold preoccupations he has often been seen, at the age of 60, running from hotel to hotel to find convenient rooms for a newly arrived Indian student.' During his stay at Shantiniketan he easily dropped into Indian ways of living, thinking and feeling, and merged into the spiritual atmosphere. The great success of his two visits to Nepal was no doubt due to this adaptability and inner affinity with the East. So it was in Japan, so elsewhere. We remember a day when in the Buddhist Vihara in Calcutta a special meeting was held in his honour. The writer of this note was one of the speakers and remarked that if there were something in the power of names it was not strange that Sylvain Lévi was at home in India. Was Lévi not the same as Brāhmaṇa, and Sylvain as Āraṇyaka? This allusion seemed to touch the distinguished guest deeply. He jumped from the platform and warmly kissed the speaker on both cheeks, a typical manifestation of his affectionate nature.

Sylvain Lévi has been a powerful ambassador and interpreter of the West to the East, and of the East to the West. He was a unifier in a discordant world. He never lost the simplicities in his learning, nor was ever his warm heart chilled by the strong cold light of his powerful reason.

It is always something great when real intellect does not obscure goodness, and when vast erudition does not dry up the waters of life.

In Sylvain Lévi the scholar and the man were both exceptional and of outstanding merit. Those who had the privilege of knowing him, will reckon it as something precious to have met him on the path of existence, to have basked in the radiations of his mind and heart. They cannot but realize that the memories

of meeting or companionship with him will remain true joys, privileges to be cherished throughout life.

JOHAN VAN MANEN.

*(Partly read in the Ordinary Monthly Meeting on the 4th November, 1935.)*

HENRY FAIRFIELD OSBORN.

(1857-1935.)

The sad death of Henry Fairfield Osborn, Zoologist, Palæontologist, Educationist, Author and Administrator, at the age of 78 has created a gap among the American men of Science which it would be hard to fill. President Osborn—as he was generally known in America since he became the President of the Board of Trustees of the American Museum of Natural History, New York, in 1908 after the death of President Jesup—made very valuable contributions to the sciences of Zoology, Palæontology and Biology; a great deal of his Zoological and Palæontological work was essentially biological, in that it was carried out with a view to arriving at a better understanding of the nature, continuance and evolution of Life. In addition, his services in the cause of Education and his work as an administrator and author are so remarkable that any of these activities would have won him an outstanding place amongst the leading workers of the times.

Osborn was born on the 8th of August, 1857. He was educated in the Columbia Grammar School and Lyons Collegiate Institute of the New York City, and later graduated at Princeton. Taking up practical field work in the Museum of Geology and Archæology at Princeton after his graduation, he became the leader of the palæontological expeditions of the University to Colorado and Wyoming in 1877 and 1878. In 1878-79 he took courses in Anatomy and Histology at the College of Physicians and Surgeons in New York, and in 1879-80 went to Europe, where he studied embryology at Cambridge under Professor Francis Balfour and Comparative Anatomy in London under Professor Thomas Henry Huxley. In 1881 he was appointed as the Assistant Professor of Natural Science at Princeton, and in 1883 as the Professor of Comparative Anatomy; this latter post he held till 1890. In 1891 he was appointed to the Da Costa chair of Biology of the Columbia University, and from 1892-95 he also served as the Dean of the Faculty of Pure Science of the University. In 1910 he retired from active teaching at Columbia,

but up to his death retained his connection with the University as the Research Professor of Zoology.

In 1900 Osborn was appointed as the Vertebrate Palæontologist of the U.S. Geological Survey, and in 1924 he was promoted to the rank of its Senior Geologist. In 1906 he was unanimously elected as the Secretary of the Smithsonian Institution, the highest scientific post in the United States of America, but in view of his great interest in the American Museum of Natural History he declined this high honour.

In addition to being a trustee and curator of several divisions of the American Museum of Natural History, New York, he served as its Vice-President (1899-1901) and was its President from 1908 to the date of his death. During his Presidential administration he inaugurated a very efficient plan for the internal organization of the American Museum; the most important development for the instruction and recreation of the visiting non-scientific public has been the preparation and installation of attractive museum groups in replicas of their natural surroundings in almost all sections of the Museum. He was also responsible for sending numerous expeditions to collect natural history material not only in different parts of America but almost all over the world. It was his far-seeing policy that has made the American Museum of Natural History one of the biggest institutions of its kind, with its very rich study collections for research, and the beautiful and instructive exhibits in its very extensive public show galleries. His work in the cause of public education was considered of so great an importance as to be acknowledged by the award of the Roosevelt Medal of Honour, presented by President Harding in 1923.

His first scientific contribution was published at the age of 21, and since that date during the 58 years of his active life he published an enormous number of original contributions either in the form of papers and monographs or as separate volumes dealing with special subjects.

The new biological principles which he enunciated as a result of an inductive line of investigations on fossil vertebrates have not all been universally accepted, but the environmental principles of adaptive radiation, polyphyletic evolution and homogenic classification have gained wide support amongst Palæontologists and, to some extent, among Zoologists.

President Osborn was a member of a large number of scientific academies and societies, and was also the recipient of a large number of medals and awards both in the United States and of the leading scientific societies all over the world. He was a foreign member of the Royal Society of London and was the only Zoologist to be elected as a Centenary Anniversary Fellow of the Asiatic Society of Bengal in 1934. The writer had the privilege of meeting him first in 1925 on the occasion of the Meeting of the British Association for the Advancement of Science in

Oxford and later in New York in 1930, and can never forget the impression created by his masterful personality. He was a charming man, pleasant and unassuming to talk to, and his interest in anything relating to Science and Education was all-absorbing. May his soul rest in peace !

B. PRASHAD.

*(Read in the Ordinary Monthly Meeting on 2nd December, 1935.)*



## PROCEEDINGS OF THE MEDICAL SECTION MEETINGS, 1935.



NOVEMBER, 1935.

A meeting of the Medical Section of the Asiatic Society of Bengal was held on Monday, the 18th November, 1935, at 6 P.M.

PRESENT.

LT.-COL. R. KNOWLES, C.I.E., B.A., M.R.C.S., L.R.C.P.,  
I.M.S., F.A.S.B., Vice-President, in the Chair.

Members :

Hora, Dr. S. L.  
Mallya, Major B. G.

Pasricha, Capt. C. L.  
White, Dr. R. Senior

(There were five visitors present.)

The minutes of the last meeting were read and confirmed.

The following papers were read :—

1. S. L. HORA.—*Recent Indian cases of live fishes impacted in the food and air passages of man.*

In a series of three articles, Dr. E. W. Gudger has brought together 38 recorded cases of live fishes in the human food and air passages. These records date from 1567 to 1933 and show that the phenomenon occurred in several countries. Of the 38 cases discussed by Gudger, 12 are known to have occurred in India and Burma. Through the kind help of Major-General D. P. Goil, 19 more cases have been collected from all over India and Burma—1 from the Bombay Presidency, 6 from the Madras Presidency, 3 from Bihar and Orissa, 1 from Bengal, 5 from Assam, and 3 from Burma. Of the 31 cases, 17 were due to *Koi* (*Anabas testudineus*), 4 to *Kholisha* (*Colisa fasciata*), and 1 each to *Mastacembelus*, *Nandus*, and *Cynoglossus*. The types of fish responsible for the remaining 7 accidents are not known. As regards the location of the impacted fishes, in all Indian cases discussed by Gudger the fish were found in the pharynx. Of the 19 cases now recorded, in 13 cases the fish was lodged in the food passage and in 6 cases in the air passage. The reports regarding the nature of treatment and the condition of patient are given, while the surgical aspect of these cases will be discussed by Lt.-Col. B. G. Mallya. The various types of fish enumerated above will be exhibited.

In explaining his paper Dr. Hora remarked that the accounts of two accidents of impaction of live fishes in the throat of man that appeared in the *Statesman* during 1927 and 1934 attracted his attention and with a view to ascertain the frequency of such occurrences and to know the types of fishes responsible for such accidents he had a circular sent to all government medical officers through the courtesy of Major-General D. P. Goil. The reports received are of considerable interest as they show that the accidents are restricted mainly to Madras, Orissa, Bengal, Assam, and Burma where *Koi* (*Anabas*) is found in considerable quantities and where people habitually use fish for food. No case has been reported from the North-West Frontier Province, the Punjab, the Central Provinces, and the United Provinces, and there is only one case reported from Bombay in which the fish concerned was a *Mastacembelus*. The accounts of certain cases were read out and attention was directed to the form of body and the direction of spines in the various types of fishes found in the human food and air passages.

2. B. G. MALLYA.—*Surgical aspect of live fishes impacted in the human food and air passages.*

The treatment in cases of this type is that of a foreign body lodged in the food and air passages. These cases are surgical emergencies and hardly any time is available to prepare for an operation on an elaborate scale, let alone sending for a surgeon or a specialist in Ear, Nose, and Throat work.

The point that requires immediate attention is whether there is respiratory embarrassment or not. In the majority of such cases there is extreme urgency as revealed by the heavy mortality in the cases collected with such care and labour by Dr. S. L. Hora. While confronted with a case of extreme urgency of this type, it is the opinion of the author that the immediate treatment should consist in doing a tracheotomy as a life saving measure.

In further explaining his remarks Lt.-Col. Mallya stated that the treatment in cases of this type is that of a foreign body lodged in the food and air passages. Such cases are brought for treatment to the nearest dispensary by day or night and may be rightly classed as surgical emergencies. Foreign bodies in the pharynx and air passages cause suffocation and require immediate treatment. The first thing to do is to inspect the throat with a good light and explore with the finger. If the head of the fish is seen or felt it may be caught with a pair of forceps and pulled out. Such cases are however rare.

One such case came under my observation at the Chittagong General Hospital where a girl aged about nine years was brought with a fish stuck in her naso-pharynx. This fish had got in through the nose and inspection of the throat revealed its head which was caught with a pair of long forceps and the fish was pulled out. There was slight bleeding. This girl made an uneventful recovery as an out-door case. There was no respiratory embarrassment in this case.

In the majority of cases there is extreme urgency as revealed by the heavy mortality in the cases collected with such care and labour by Dr. S. L. Hora. The person is suffocated by the foreign body and signs of asphyxia are present. As death occurs in a few moments, there is hardly any time to prepare for an operation on an elaborate scale, let alone sending for a surgeon or a specialist in Ear, Nose, and Throat work.

In cases of extreme urgency of this type immediate treatment consists in doing a tracheotomy as a life saving measure and if no instruments are

available a pocket knife may be used for giving the patient air which he needs most at this moment. Tracheotomy is an urgent operation and every medical man is expected to do this operation with any instruments at hand at any time.

Dr. Nag Chowdhury stated that at the request of Lt.-Col. Mallya, he had studied all the cases reported by Dr. Gudger and those recently collected by Dr. Hora. He observed that the tenacity of life of the fishes concerned in these accidents, especially that of *Koi*, makes the task of handling the fish very difficult, for, as long as the fish is alive, it can raise its spines and can make forward progress in the food or air passage. In the treatment of such cases, there are four main considerations: (i) condition of the patient, (ii) part of the passage obstructed—pharynx, oesophagus, larynx, trachea, lung, etc., (iii) the type of fish impacted, and (iv) appliances to be used. For the purposes of treatment such cases can be divided into six main groups according to the part of the passage obstructed: (i) Oropharynx, (ii) Hypo-pharynx, (iii) Oesophagus; upper, middle, and lower parts, (iv) Larynx, (v) Trachea, and (vi) Lungs or Bronchi.

According to the condition of the patient a stimulant must be given to prevent shock and reflex spasms of pharyngeal and laryngeal muscles. In the cases of respiratory embarrassment tracheotomy or laryngotomy should be performed at once. After these life saving measures have been taken the actual state of affairs should be ascertained by passing the oesophagoscope and laryngoscope. If the head of the fish can be located within easy reach it should be held by a long pair of forceps and the fish pulled out. If the fish is deeply impacted then with the help of an endoscope the gill covers and fin spines should be cut with long cutting forceps. The fish should then be pulled out and the cut portions should be removed afterwards separately. In some cases it may be necessary to expose the pharynx by lateral pharyngotomy to pull out the fish with the head first through the wound. When the fish happens to be in the middle or lower parts of the oesophagus, then it should be pushed down into the stomach where it may be allowed to remain for normal digestion or taken out by gastrotomy, as may appear most suitable. In the case of the larynx, trachea, and bronchi a low tracheotomy is essential and all effort should be made to restore respiration as early as possible. The fish should be then pulled out through the wound with the help of the bronchoscopy tube bit by bit, may be in two or three sittings.

In summing up the author referred to the bad custom of biting off the heads of these fishes which sometimes leads to calamitous results and deprecated the use of the probang in such cases. He advocated the use of X-rays, where available, for the precise location of the fish before operation.

Lt.-Col. R. Knowles thanked the three authors on behalf of the Society for the interesting and valuable papers they had communicated to its Medical Section. He referred to an old case of thirty-three years ago where a cat was concerned. A long fish bone had stuck in the throat of the cat and it was possible to remove it with the help of a probang. He enquired from Dr. Hora the percentage of mortality in the cases recently collected by him.

Capt. C. L. Pasricha enquired whether it was not possible to remove an impacted fish from the throat bit by bit by cutting off portions of it. In the case of air-breathing fishes, such as *Koi*, he suggested that an injection should be given to kill them at once.

In reply to Col. Knowles Dr. Hora stated that there were twelve deaths out of the nineteen cases collected by him recently.

In reply to Capt. Pasricha Dr. Hora stated that Dr. Francis Day, a Medical Officer and the greatest student of Indian Fishes, suggested the removal of the fish bit by bit after attending to the respiratory embarrassment first. In his opinion the portions of the fish which could not be



easily removed should be allowed to stay *in situ* till they decay and fall down. The smell is immaterial in such cases where it is a question of life and death.

Capt. *Paericha* suggested that with the modern appliances it should be possible to suck out the inner mass of the fish after removal of such of its portion which could be easily handled.



#### DECEMBER, 1935.

A meeting of the Medical Section of the Asiatic Society of Bengal was held on Tuesday, the 17th December, 1935, at 6 P.M.

#### PRESENT.

SIR LEWIS FERMOR, KT., O.B.E., A.R.S.M., D.Sc. (London), F.G.S., M.INST.M.M., F.R.S., F.A.S.B., President, in the Chair.

#### Members :

Basu, Mr. N. M.	Chopra, Lt.-Col. R. N.
Brahmachari, Sir U. N.	Lal, Dr. R. B.
	Mukhorjee, Dr. J. N.

(There were twelve visitors present.)

The minutes of the last meeting were read and confirmed.

The following paper was read :—

LT.-COL. R. N. CHOPRA and A. C. ROY.—*Some Biochemical Characteristics of Snake Venoms.*

Some biochemical characteristics of snake venoms were investigated. Cobra and Russel's viper venoms were selected for this study because though they have some pharmacological properties in common, they differ strikingly in other respects. Thus, the neurotoxic element is preponderant in the cobra venom, while hæmorrhagic or anticoagulant property is more or less peculiar to the venom of the viper, the nervous centres being not much affected. The results of experiments carried out by these workers suggest that by the process of filtration through Seitz filter either the hæmolytic element has been altogether eliminated or it has been inactivated in such a manner that it is incapable of being reactivated by lecithin. The former hypothesis appears to be the more probable one, as Houssay (1921) found that the hæmolytic substance of snake venom is absorbed by animal charcoal, the residual venom solution being non-hæmolytic. They believe that with Seitz filter also a similar process of adsorption is responsible for the loss of hæmolytic property.

Experiments are in progress with a view to ascertain the nature of this hæmolytic principle and also how far this process of filtration affects the other properties of the venom solutions.

Colonel *Chopra* gave the results of the pharmacological action of filtered and unfiltered venoms and pointed out that there was no doubt that the action on the blood pressure and respiration of the unfiltered venom was different from that of the filtered venom.

Dr. *R. B. Lal* suggested that attempts might be made to deaden the lytic principles retained in the Seitz filter and thus obtain it in a pure condition. For this purpose filtering materials such as kaolin might be used, and care should be taken to prevent oxidation of the active principle.

Dr. *M. N. Bose* remarked that it is a well-known fact that cobra venom contains a lecithinase, and that the constitution of lecithin and kaephalin has been partly worked out with the help of the cobra venom.

Dr. *J. S. Chowhan* thought that filtering the venom through Seitz filter has the advantage of making it sterile, without the help of chemicals and at the same time of removing some of the toxic principles. He cited sixteen cases where cobra venom was used for cancer and different types of neuralgia.



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**YEAR-BOOK**  
**OF THE**  
**ROYAL ASIATIC SOCIETY OF BENGAL**

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**VOLUME III**

**1937**



# Year-Book, Royal Asiatic Society of Bengal, 1936.

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## PROCEEDINGS OF THE ANNUAL MEETING, 1937.

### FEBRUARY.

The Annual Meeting of the Royal Asiatic Society of Bengal was held on Monday, the 15th February, 1937, at 5-30 P.M.

### PRESENT.

HIS EXCELLENCY THE RIGHT HONOURABLE SIR JOHN ANDERSON, P.C., G.C.B., G.C.I.E., GOVERNOR OF BENGAL, Patron and President, in the Chair.

#### *Members :*

Bagchi, Dr. K. N.	Jain, Mr. C. L.
Bivar, Mr. H. G. S.	Jenkins, Dr. W. A.
Bose, Mr. M. M.	Ledrus, Rev. M.
Bothra, Mr. S. K.	Mahtab, Maharajadhiraj Bdr. B. C.
Brocke, Dr. A. G.	Mahtab, Maharaj-Kumar U. C.
Brown, Mr. Percy	Manen, Mr. Johan van
Brahmachari, Dr. P.	Martin, Capt. M. F. C.
Brahmachary, Rai Bahadur S. C.	Mitter, Hon'ble Sir B. L.
Calder, Mr. C. C.	Mitter, Mr. S. C.
Chakravarti, Prof. Chintaharan	Modi, Mr. J. J.
Chanda, Rai Bahadur R.	Mookerjee, Mr. B. G.
Chatterjee, Mr. Patit Paban	Mukherjee, Dr. J. N.
De, Mr. K. C.	Mullick, Mr. M. L.
Dunn, Mr. J. A.	Nandy, Maharaja S. C.
Ezra, Sir David	Olpadvala, Mr. E. S.
Flury, Mr. E. C.	Rahman, Mr. S. K.
Ghosal, Dr. U. N.	Ray, Dr. H. C.
Ghose, Mr. Sushil Chandra	Rossetti, Mr. F.
Ghose, Mr. T. P.	Roy, Rai Bahadur Sarat Chandra
Haq, Prof. M. Mahfuz-ul	Selzam, Dr. E. von
Heron, Dr. A. M.	Sen, Mr. J. M.
Hora, Dr. S. L.	Sen, Mr. D. M.
Hobbs, Mr. H.	Wadia, Mr. D. N.
Hosain, Dr. M. H.	White, Mr. J. C.
Jack, Hon. Mr. Justice R. E.	Wilson, Dr. H. E. C.

and others.

#### *Visitors :*

Aiman, Mrs. J. S.	Flury, Mrs. E. C.
Bhatia, Dr. B. L.	Ghatak, Mr. N.
Bingham, Mr. George E.	Ghose, Mr. H. N.
Bose, Mr. H. K.	Ghosh, Dr. J.
Bose, Mr. S. M.	Goetz, Dr. Hermann
Chakravarti, Mr. P.	Goetz, Mrs.
Cholaapke, Mr. K.	Hoskins, Capt. G. H.
Colson, Mr. L. H.	Knight, Rev. P.
Das Gupta, Mr. K. C.	Knight, Mrs.
De, Mr. H. K.	Macfarlane, Mr. J. B.
De, Mrs. K. C.	Macfarlane, Mrs.
Deb, Raja Kshitindra	Mahalanobis, Mr. S. C.
Ellis, Mr. Norman A.	Majumdar Mr. S. K.

Maltley, Mr. G. A.  
 Mandal, Miss Rahel  
 Mitter, Mr. N. C.  
 Modi, Miss Khorsed  
 Modi, Miss Mehera  
 Modi, Mrs. Rhoda  
 Neete, Rev. J. van  
 Pinnell, Mr. L. G.  
 Podenwils, Count  
 Pringle, Mr. R. J.  
 Rossetti, Mrs.  
 Sahni, Dr. M. R.  
 Sahni, Mrs.

Sarkar, Sir Jadunath  
 Scallan, Frank C.  
 Scallan, Mrs.  
 Sen, Lt.-Col. J. L.  
 Sen, Mrs.  
 Sharafuddin, Mrs. S.  
 Sinha, Mr. R. K.  
 Touseh, Mr. D.  
 Tuxen, Dr. Paul  
 Verstraten, Rev. X.  
 Wyer, Mr. A. F. van de  
 Wyer, Mrs.

and others.

The General Secretary and the Honorary Treasurer received the President, His Excellency the Governor of Bengal, at the entrance of the Society's building.

The retiring Council assembled at the head of the staircase to receive His Excellency and were presented to him.

Then the President for 1936 declared the Annual Meeting open and said :—

‘LADIES AND GENTLEMEN,

Voting papers for the election of the new Council as well as voting papers for the election of Ordinary Fellows will be distributed to all the Ordinary Members present.

I request the Ordinary Members present to deliver their votes in the collection box which will be sent round to them.’

After the distribution of the voting papers the President said :—

‘LADIES AND GENTLEMEN,

Have all votes been delivered? If yes, I call upon Messrs. H. Hobbs and Percy Brown to act as scrutinizers.

I now call upon the General Secretary to present the Annual report for 1936.’ (See page 25.)

After the presentation of the Annual Report by the General Secretary, the retiring President delivered his Annual Address. (See page 8.)

After the reading of the Annual Address, the General Secretary transmitted to the President the results of the Council election.

The President while announcing the results of the Council election said :—

‘LADIES AND GENTLEMEN,

I now announce the result of the Council vote. On the report of the scrutinizers, I have the pleasure to declare all the candidates for the next year set forth in the Ballot paper duly elected.’ (See page 19.)

The President briefly thanked the Society for his re-election.

Then the President for 1937 made the following announcements :—

'I have now great pleasure in announcing that, having heard the report of the scrutineers, I declare the following Ordinary Members:—

1. Dr. K. N. Bahl,
2. Rao Bahadur K. N. Dikshit,
3. Dr. N. N. Law,
4. Dr. J. N. Mukherjee,

duly elected Ordinary Fellows of the Royal Asiatic Society of Bengal.'

'I have now to announce that no papers have been received in competition for the Elliott Prize for Scientific Research for the year 1936 which was for Mathematics.

The prize for 1937 will be for work in Chemistry regarding which a detailed announcement has been published in the *Calcutta Gazette* and the *Bihar and Orissa Gazette*.'

'My next announcement regards the Annandale Memorial Medal. This medal is awarded every three years for conspicuously important contributions to the study of Anthropology in Asia.

This year the medal is awarded to Dr. John Henry Hutton, C.I.E., I.C.S., lately Deputy Commissioner of Assam, and the late Census Commissioner of India, for his long-sustained and distinguished labours in the field of Anthropological research.'

After these announcements, Sir David Ezra, Senior Vice-President, moved the following hearty vote of thanks to His Excellency:—

'The proceedings have come to an end and now I would like to propose a hearty vote of thanks to His Excellency in the triple function of Governor, Patron of our Society and its President. You all will agree that we have rarely listened to so thoughtful and suggestive an address at our Annual Meetings, as we did this evening. It is not for me to detail all the high qualities which make us feel proud of our President and cherish affectionate feelings for His Excellency. Be it sufficient that we thank His Excellency, that we express our admiration and gratitude to His Excellency. Godspeed on his further journey through life.

Ladies and Gentlemen, three cheers for His Excellency.'

The President made the following final announcement:—

'In declaring the Annual Meeting dissolved, I now invite the Members and visitors to inspect the exhibits shown at the other end of the hall.'

The General Secretary conducted the President for examination of the collection of exhibits (see page 20) and then accompanied him to the entrance on his departure.



## **ANNUAL ADDRESS, 1936-37.**

### **A STUDY OF THE CONCEPTION OF POWER IN THE SOCIAL ORGANISM.**

#### **I. INTRODUCTION.**

Before I proceed to the subject on which I propose to address you this evening may I say how sensible I am of the honour you have done me by electing me to be your President. I am happy moreover that in this year of its annals the Society has by permission of His Imperial Majesty the King-Emperor become the Royal Asiatic Society of Bengal. This title is a recognition that the Society has earned for itself a worthy place among the learned societies of the Empire.

I have to record the loss by death of two outstanding members, Sir Rajendra Nath Mookherjee and Colonel Knowles. In Sir Rajendra Nath we have lost a personality whose steadfastness of principle, keenness and balance of intellect, and record of successful endeavour will long stand as an example to his countrymen, and I personally have like many of you lost a valued friend. He was a member of over thirty years' standing, our President in 1924 and 1925 and an Honorary Fellow since 1929.

Colonel Knowles, a member since 1920 and a Fellow since 1927, was for many years a tireless and enthusiastic Medical Secretary of this Society, a man of great industry and deep learning and of a most winning disposition. In recognition of his services to tropical medicine I had the pleasure, rather more than a year ago, of investing him with the Insignia of a Companion of the Order of the Indian Empire and was struck then by the precarious state of his health. He refused to give up and died, as no doubt he wished, in harness.

During this year our General Secretary, Mr. Van Manen, who had not had leave for nearly nine years, was granted six months' leave for medical reasons. We are delighted to see him back with us reduced in figure but restored in health and as exuberant as ever in learning and good humour.

Among gifts to the Society worthy of special mention I have to record an excellent portrait in oils painted by Atul Bose of the late Sir C. C. Ghosh, President of the Society in 1932 and 1933 and a member of the Council for several years. It was presented by his brother Mr. D. C. Ghosh.

We have also received as a permanent loan a collection of 12,000 Sanskrit Manuscripts made over by the Government of India.

## II. A STUDY OF THE CONCEPTION OF POWER IN THE SOCIAL ORGANISM.<sup>1</sup>

The choice of the subject on which I propose to address you this evening requires some comment. Before being concerned with the art of Government I was for some time a student of science. The preoccupations of later years have left me no leisure to pursue those earlier studies in detail but perhaps as a result I have been led into speculations that would not have occurred to me had I myself developed on other lines.

I propose to suggest under this heading—‘A Study of the Conception of Power in the Social Organism’ a few reflections which attempt to bring the conclusions of the biologist into relation with the conclusions—still inchoate—of the student of the social and political organization of mankind.

Necessarily with the very limited leisure at my disposal, I must confine my attempt to suggesting fields of enquiry rather than putting forward conclusions: and should any proposition that I seem to suggest appear untenable let me take refuge in the quotation that<sup>2</sup> ‘a false theory that can be compared with facts may be more useful at a given stage of development than a true one which is beyond the comprehension of the time’.

Power is a concept common to biological, philosophical and political studies. In the biological sphere power is a characteristic of every living thing that is capable of influencing some other thing: in some form or other it is an essential concomitant of life: in the sphere of philosophy the study of power is the essence of the subject. What is the nature of this thing that impinging from outside upon the bodies and minds of men can change their form and their development? What is its source—how does it behave—how should men comport themselves towards it? The study of politics is concerned with the basis, the nature, the obligations and the purposes of authority, which is but another name for power in the hands of the body politic.

But my theme is the attitude of men towards power rather than power itself: what have men conceived its nature to be? Is there traceable in those various conceptions any development comparable to the development in the physical organism that is known to the biologist as evolution?

If there is any such development is it progressive—does it point to an ultimate conclusion—can we compare the attitude towards power or authority of different men at different times and say that this or that attitude is an index of a higher develop-

<sup>1</sup> In the text the term ‘Social Organism’ is used as including both social and political developments unless the contrary is made clear in the context.

<sup>2</sup> *Encyclopædia Britannica*, 14th Edn., Vol. 20, p. 116.

ment in the social organism than some other attitude? If so, can we trace anything like an ordered evolution in the social and political development of mankind and can we forecast its direction?

I do not presume to answer these questions but if I should in this brief address provoke thought or stimulate research by others equipped by leisure and talents for the task, I shall make no apology for having failed to contribute a more technical thesis to the records of this Society.

The history of man may be described in one aspect as an endeavour first to adjust himself to his environment and later to control that environment itself: by his success in adjustment—by a process of submission to the apparently inevitable—he has survived: by the development of reason he has been emboldened to believe that not content with submission to environment he may aspire to control the forces and conditions that surround him and through them to control his own evolution. Comparably perhaps with this change in outlook, the attitude of man towards natural forces and social authority has also changed.

Let us cull a few specimens. Browning in his poem 'Caliban upon Setebos' gives us a picture of a primitive man's conception of power—an imaginative picture perhaps but not for that reason necessarily at variance with inferences drawn from scientific enquiry.

Caliban the half-man, lying at his ease on a fine afternoon, speculates on Setebos his god—invests him with his own characteristics—finds him powerful and capricious—why not '—is capricious himself for that matter. Somewhere above Setebos, he thinks, there may be something remote and incomprehensible that he can only call 'The Quiet'—but that is no concern of his: Setebos is the one that matters to him. And when suddenly a fierce tropical storm breaks in upon his meditations Caliban curses himself for daring to speculate upon his god and grovels in terror and penance before the wrath of Setebos.

We thought perhaps we had travelled a long way from that conception of power but it only needed the capricious insecurity of a world war to bring it back. A modern American novelist<sup>1</sup> writing shortly after the war compares the race of mankind to a swarm of ants trying to escape from a log burning on his camp fire. 'I remember thinking at the time' he writes 'that it was the end of the world and a splendid chance to be a Messiah and lift the log off the fire.....But I did not do anything but throw a tin cup a water on the log so that I would have the cup empty to put whisky in.....I think the cup of water on the burning log only steamed the ants'. The old

<sup>1</sup> 'A Farewell to Arms.' Ernest Hemingway, Ch. XLI.

conception of power is there though the grovelling and the terror has yielded place to grim endurance: except for that we are back at the beginning of the circle. But perhaps this conception of the nature of power is not the whole truth.

From Caliban to magic—to spells, and to the ‘mantra’ in its primitive conception seems but a natural process. Man is still weak in the physical forces he can bring to bear on nature, weak also except in the strength of his own arm in the forces he can bring to bear on his fellow men. But he has begun to perceive a sequence in things, and if one thing can follow another or be caused by another, why should he not hit on the means of causing things far beyond the limit of his own strength?

Power itself becomes an abstract conception. An interesting illustration of this conception is quoted in a book by Dr. G. van der Leeuw<sup>1</sup> from an account written in 1899 by Codrington, an English missionary, of the Melanesians. ‘He drew attention to a remarkable conception of that people which he found indicated as “*Mana*”. He describes it as a force, not physical, but also not spiritual in one sense—in a certain sense it is “supernatural”. It makes a thing—a man—an animal into what they are.’ I cannot help thinking of the Platonic ‘*Idea*’ as an interesting gloss—but to return to *Mana*. ‘If anything is great or very powerful, or dangerous, then the presence of much *Mana* is indicated. The whole of the Melanesian religion consists in the obtaining of this *Mana* for oneself, or in contriving that it works for one’s own good.’ That last observation could be applied to much political theory and practice to-day: but let me continue. ‘This force may best be compared to an electric current. Something may be charged with it, and then its force develops into a beneficent or dangerous direction. One can do much with it but has also to be very careful with it.’ I am tempted to compare an ancient and very true Chinese proverb which says—‘Don’t ride on a tiger—you can’t dismount at will’. In other words ‘Don’t catch a wolf by the ears’.

To master and employ this mysterious quality instead of dreading and evading it is the beginning of magic: it is also the beginning<sup>2</sup> of conscious human development. To understand it and to know the ends for which it should be used is the purpose of philosophy, politics and morality.

Magic is power only so long as it works: but in so far as the performer can induce others to believe that it will work, magic still retains its potency over the human mind. <sup>3</sup>‘The universe is under the power of the gods—the gods are under the power

<sup>1</sup> Introduction to the History of Religion—Van der Leeuw, Haarlem, 1924.

<sup>2</sup> Dictionary of Philosophy and Psychology, Vol. II, pp. 35-36.

<sup>3</sup> Encyclopædia of Religion and Ethics, Vol. 3, p. 441.

of mantrams: the mantrams are under the power of the Brahmins: therefore the Brahmins are our gods.' This is a quotation that may sound strange to modern political thinkers, but is it so far removed from the ideas of those who in the political sphere pin their faith to doctrines not founded upon experiment but formulated *a priori* for acceptance as a creed? Looking at large portions of the world to-day can it be denied that magic spells long discredited by experiment in the sphere of the natural sciences still retain their potency in the sphere of political theory? But I am digressing.

While men were still attempting to discover the secret of control over the forces of nature, others, perhaps stronger of arm, perhaps with a more limited and more practical vision, had demonstrated the power that can be attained by organizing and controlling their fellow men. We do not know when first the tribe arose from the family to become a nation or when first a nation became an empire, but of this we can be fairly sure that the process was one of discipline and organization—of the growth of law—not by any means what we might regard as just laws—but of well-recognized laws made by men for their own purposes; we see man building up within an incomprehensible universe a comprehensible microcosm—an environment which he could control. Power takes on a new aspect—it becomes a force consciously wielded and directed to definite ends—futile ends perhaps because they may not have been the ultimate ends towards which the social organism must move or be moved if it is to survive.

At the close of the eighteenth century Tshaka,<sup>1</sup> the head of a small tribe of Zulus, set out to master his neighbours by organizing his tribesmen into regiments after an example originally derived from the Europeans. He carried his organization of his fellow men to the point of forbidding, under pain of death, any intercourse between the sexes except under licence—a licence granted only as a reward to the bravest and most successful of his regiments. The coward or the regiment that failed in battle was ruthlessly wiped out. In the eighteen years or so of his rule, we are told, he directly or indirectly caused the death of about two million souls and revolutionized the lives of the population within a radius of 500 to 1,000 miles from his capital. His social system lasted till the Zulu War of 1879 it produced, we are told, 'that innocence and general attractiveness that we habitually associate with naive intelligence, strong physique and an exacting foe'. But its basis was in fear and its justification was success in war. With failure in war and removal of fear it ended. It is interesting to be told that the occasion—

<sup>1</sup> 'Tshaka, the great Zulu Despot,' James Stuart, 'United Empire', 1924 (Vol. XV, new series).

I do not say the root cause—of that war was the escape of a Zulu girl and her recapture by the Zulus in British territory.

I need not refer in this company to the great empires of history of which none have survived intact as social organizations: but whatever the fate of the individual enterprise, the conception of power derived from the organization of mankind has survived.

Now let us come to a conception of power in the universe so revolutionary that even to-day it remains no more than a conviction. I refer to the conception that all the forces in the universe including those which underlie the development of man himself as a physical, social and moral being are subject to principles which by analogy can be described as laws: moreover, that those laws are essentially good if only because, being inevitable, they constitute the criterion of what is good: and that in the knowledge and understanding of those laws—could man ever understand them—lies the knowledge of good and evil and of man's ultimate destiny. This is a conception which in a loose kind of way is so often taken for granted that we forget how revolutionary such an idea was and is, and how profound are its implications. Its precise origin in point of history is so far as I know untraced, but we can say that at one period at least—between roughly the seventh and the second century before the Christian era—such a conception had appeared in the East and in the Mediterranean, sometimes in the form of religious teaching and at other times in that of philosophical speculation.

What is the basis of this conception? Did man import the conception of order into the universe merely on the analogy of the partial order he had established in his own social microcosm and found to be better for his immediate purposes than absence of order? Or may it be that in the search after the true basis and uses of power in the social organism man is seeking for something real and ultimately discoverable because that and nothing else will ultimately make possible his survival and continued evolution as a rational species?

It is at any rate a fact that from this same period date the first recorded speculations on the basis, the nature and the purpose of authority in the social and political microcosm. It is obvious that the natural and political sciences have not kept pace in development, the one at different times seeming to outstrip the other. Men were of necessity experimenting in the social organism and getting empirical results long before the beginning of scientific experiment as we understand it; but unlike the man of science the ruler of men cannot control his experiment and, if one fails, he may be too late to try another.

Nevertheless, variations are discernible in the conception of power in the social sphere. As to its basis, it has been con-

ceived as based on fear, on magic or its equivalent, on worship and on rational acquiescence arising from understanding. Social power must from the earliest times have been recognized as accompanied by responsibility—if only a responsibility for the preservation of the ruler himself. The so-called democratic political thought of Greece recognized the responsibility of the State only as extending to the interests of those of its component individuals who were entitled to the full rights of citizenship in mediæval Europe States and their populations were patrimonies to be inherited or acquired by marriage or warfare; and to Bacon<sup>1</sup> the prime responsibility was for the preservation and aggrandizement of the State itself. That the State or the social organism should be responsible for providing the greatest scope for the physical, intellectual and moral development of all individuals within its confines is still a new conception, and linked with it is the conception of the structure of the State as a thing that itself must be open to change and development, in order to provide that changing environment in which man may continue his further evolution as a rational being.

As to the employment of power some regard it as an evil to be avoided others would contrive a balance of authority in the social organism, to maintain just that essential degree of stability and material prosperity that may permit the development of the individual; others again conceive of power in the social organism as a thing to be centred in strong hands, in order that the individual life may be organized to fulfil the predetermined purposes of the ruler. One school of thought conceives the free working of the individual reason as the only means by which the true nature and uses of authority in the social organism can be ultimately discovered. Another sees men in the mass like a bar of soft iron, its molecules each magnetic but neutralizing each other, and needing only the application of an external magnetic force to draw them into unison and convert the inert mass itself into a powerful magnet to be employed by the master mind.

I do not say that in practice any of these conceptions is held and acted on to the exclusion of the other by any particular type of body politic. Democracies may be capricious, incomprehensible and tyrannical in no less degree than autocracies may have shown toleration and enlightenment. The most convinced believers in rational consent as the basis of authority may be led into the most drastic interference with individual liberty in the attempt to secure that environment of stability and prosperity without which social evolution cannot proceed: the believers in dominant personality may often trim their sails to the wind: but the differences in the underlying conception of authority remain.

<sup>1</sup> Bacon, *Essay* 29.

Such then are some of the variants of men's conception of power in the social organism. Have they a comparative value and if so by what standard can we value them? Is it possible to say that one is more likely to be on the main line of evolution than another?

Clearly no one can say that any of these conceptions has alone survived to the extinction of another. Yet this also is not surprising for evolution does not work in a straight line, and the data of history for all their volume and variety are not comparable to the data of experimental science.

This is what Fisher <sup>1</sup> says after completing a study beginning with primitive man and ending with Communism and Fascism:

'One intellectual excitement has, however, been denied me. Men wiser and more learned than I have discerned in history a plot, a rhythm, a predetermined pattern. These harmonies are concealed from me. I can see only one emergency following upon another as wave follows upon wave, only one great fact with respect to which, since it is unique, there can be no generalizations, only one safe rule for the historian: that he should recognize in the development of human destinies the play of the contingent and the unforeseen. This is not a doctrine of cynicism and despair. The fact of progress is written plain and large on the page of history; but progress is not a law of nature. The ground gained by one generation may be lost by the next. The thoughts of men may flow into the channels which lead to disaster and barbarism.'

I venture to think, however, that this conclusion is not at variance with the conclusions of biology. Biological science has long given up the conception of evolution as a process free from chance or excluding the exercise of choice; yet reviewing as it attempts to do a period as far exceeding the known history of man as a millennium exceeds a day, science believes it can discern comprehensible developments if the period chosen be long enough. The problem for the political philosopher is whether he can forecast those developments and whether the study of the natural sciences can help him to do so.

Let us try to project ourselves back to the age of the giant Dinosaur or the Pterodactyl of the Jurassic period; could we have imagined that those great creatures would survive only as fossil remains? We do not know exactly what our own ancestors were like in those ages but we do know that they, the earliest mammals, and the Dinosaurs were contemporaneous and sprang from the same common stock. What chance or choice caused that other branch of the family to break off and develop into the Dinosaurs while our ancestors developed by infinitely slow degrees into men is still a matter for speculation, but when first



the brothers separated and the cousins grew further apart who could have known—as we believe that we know now—that the extreme and highly specialized development however much more formidable in its own environment was the one less likely to survive in a changing world?

Is it possible that some form of social organism will eventually emerge and survive as the most suitable environment made by man—or through man—for his further evolution?—and if so which of the social organisms that we know will be its parent or parents? May it be that here, too, the extreme manifestations are doomed to extinction? An interesting speculation!

Closing his address <sup>1</sup> to this Society six years ago your then President, Colonel Seymour Sewell, said:

‘I would on the other hand postulate that man has, or in the very near future will have, rendered himself so independent of his environment that it will no longer be able to affect his physical characters and that if there is to be any further evolution, this must be the result of his own mental processes.’

That statement, I think, excludes the possibility of cataclysm brought about either by the forces of nature or by the abuse of man’s own powers—but leaving that aside, does not Colonel Sewell’s conclusion amount to this, that it is in the social rather than in the individual organism that we must look for evolution in the future?

I do not venture to state this as a theory—I merely put it forward as a speculation. But since the different groups into which mankind is divided can no longer, even if they would, isolate themselves one from another, it would seem possible that if man is to evolve as both a rational and a social being, there must also evolve a social microcosm wherein the basis, the nature and the uses of authority will be recognized universally and rationally both by those who exercise it and by those upon whom it is exercised.

Whether or not there will be any evolution on such lines must remain a matter of belief or lack of belief: should it ever occur it may not be in the time of any descendant of ours whose conceptions of the nature of power we can envisage with accuracy. But let us not fall into the error of assuming that such an evolution must naturally take place.

Once again an analogy from biological studies is of interest. In the biological world the individual organism bears traces of its primæval history and development, of which the significance may be discernible only to the man of science: thus also the mind of man is a complex entity with a long history. It may well be that in the differing political organisms of the world to-day lie differences not to be explained by causes within the

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<sup>1</sup> Annual Address to the Asiatic Society of Bengal, 1930-1931.

scope of recorded history: if so, there is no reason to presume that the different races of the world will necessarily react in the same way to the same political, cultural and economic influences. We may well be still at the stage when each may require something distinctive in its political organism to satisfy some deep laid tendency, different in essence and persisting through long periods of cultural or political assimilation only to reassert itself at some later epoch.

In the German a combination of mysticism and docility with irrepressible vigour of race may be an underlying factor in the history of his social and political development. In Italy there is a people with proud memories of empire long disunited and politically impotent—a people whose history shows a strange combination of exuberance of talent and asceticism. When in Western Europe the temporal power of the Roman Emperors remained distinct from the power of the Church was it an accident that the Orthodox Church became the Church of Russia—a Church identified completely with the temporal power—or was there then some tendency to absolutism that still expresses itself to-day?

I would not be so rash as to generalize about India but it is, I think, true to say that in India until recent times the main current of thought was concerned with the development of the individual and the sanctity of his purely social environment using the word 'social' in its narrower sense: it regarded his reactions to mundane events as more important than the events themselves. The social organism was merely a medium in which man had to work out his own salvation—not a plastic medium susceptible of control but a rigid and unalterable one. To such thought the political structure was a mere superimposition and irrelevant so long as the social structure was kept intact. It was, I think, Akbar who first conceived the practical possibility of a unified political, cultural, and possibly even social organism for India as a whole—at about the same time as the first beginnings of national monarchies in Europe put a definite end to the conception of an unified political structure for Europe.

The conception of a socially and politically unified India as a practical possibility and the whole current of political thought that arises from that conception are modern in the extreme and directly attributable to the British connection. We already see, I state it merely as a fact and without any controversial implications, a conscious intellectual movement to sever that connection. Supposing it were severed? Is the tendency for unification so historically strong or so essential for the further evolution of the Indian peoples that it must survive, or is its necessity so demonstrable to reason and is the power of reason so strong as to ensure the easy predominance of such a tendency?

These are reflections suggested by recorded history but if tendencies arising from recorded history so strongly influence

the minds of successive generations may it not follow that the influences of unrecorded history are still extant and in the strictest sense of the word incalculable?

It is only on the assumption that all men are capable of evolving into completely rational beings and that the influence of reason will eventually overcome environment that we can conceive of the emergence and survival of one type of social organism. That assumption may be a conviction but it is no more; but if so be that there is an evolution in the social organism and if one conception of power may help us to understand and control that evolution, there is a need to seek out that conception not merely abstractly or *a priori* but also by the patient study of phenomena.

To those who believe in the possibility of evolution history rolls on like a mighty river ever seeking its way to the sea: it is not a canal cut straight to a clear destination nor does its path lie down a broad valley leading direct to the ocean. It may run over rapids or split into deltas: a stratum of rock or a new impetus, beginning perhaps with a small and insignificant cut, may turn back or divert its course for centuries: parts of it may dry up leaving on its dead banks the ruins of once famous cities.

Man engrossed in contemporary events, stands on its bank, and seeing only the rush and swirl of the eddies or the desolate surface of some disconnected swamp asks himself whether what he surveys is river at all: perhaps it is only an interminable whirlpool or a stagnant marsh, its surface broken now and then by bubbles only to relapse again into quiescence.

Some are content to watch its flow only hoping that it will not break its banks and engulf them in ruin. Others proclaim that they have found the main current, dig a channel here or build an obstruction there to guide or control it, not knowing and perhaps not caring whether they are leading the precious stream against an impenetrable ridge or diverting it into a futile backwater.

The student of recorded history standing on a little eminence traces back its course till soon it disappears into the mists of time—he sees how it has come and speculates how it might have gone had this obstruction been removed or that channel cleared, but he cannot divine what natural obstacles or what caprice of man may guide its course in the future.

To see its course as a whole, to comprehend the forces that drive it on, to envisage the country that it yet has to traverse, to find the main channel and to help it on its journey towards the sea—therein lies a task worthy, I think, of the highest intellects and the deepest learning.

JOHN ANDERSON.

*The 15th February, 1937.*

## OFFICERS AND MEMBERS OF COUNCIL.

### ROYAL ASIATIC SOCIETY OF BENGAL, 1937.

*Elected and announced in the Annual Meeting,  
15th February, 1937.*

#### *President.*

H.E. The Rt. Hon'ble Sir John Anderson, P.C., G.C.B.,  
G.C.I.E.

#### *Vice-Presidents.*

Rai Sir Upendra Nath Brahmachari Bahadur, Kt., M.A.,  
M.D., Ph.D., F.R.A.S.B.

A. M. Heron, Esq., D.Sc. (Edin.), F.G.S., F.R.G.S.,  
F.R.S.E., F.R.A.S.B.

Percy Brown, Esq., A.R.C.A., F.R.A.S.B.

Lt.-Col. N. Barwell, M.C., M.A., Barrister-at-Law.

#### *Secretaries and Treasurer.*

General Secretary:—Johan van Manen, Esq., C.I.E.,  
F.R.A.S.B.

Treasurer:—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S.,  
F.R.S.E., F.R.A.S.B.

Philological Secretary:—S. K. Chatterji, Esq., M.A.,  
D.Lit. (London), F.R.A.S.B.

Joint Philological Secretary:—Shamsu'l 'Ulama Mawlawi  
M. Hidayat Hosain, Khan Bahadur Ph.D., F.R.A.S.B.

Natural History Secretaries { Biology:—Baini Prashad, Esq., D.Sc.,  
F.Z.S., F.R.S.E., F.R.A.S.B.  
Physical Science:—J. N. Mukherjee,  
Esq., D.Sc. (Lond.), F.C.S. (Lond.).

Anthropological Secretary:—Rai Bahadur Ramaprasad  
Chanda, B.A., F.R.A.S.B.

Medical Secretary:—Bt.-Col. R. N. Chopra, C.I.E., M.A.,  
M.B., I.M.S., F.R.A.S.B.

Library Secretary:—M. Mahfuz-ul Haq, Esq., M.A.

#### *Other Members of Council.*

C. C. Calder, Esq., B.Sc., F.L.S.

N. G. Majumdar, Esq., M.A., F.R.A.S.B.

K. C. Mahindra, Esq., B.A. (Cantab.).

The Hon'ble Mr. Justice John Lort-Williams, Kt., K.C.

B. S. Guha, Esq., M.A., Ph.D. (Harvard).

W. D. West, Esq., M.A. (Cantab.).

## EXHIBITION ANNUAL MEETING.

LIST OF EXHIBITS SHOWN AFTER THE ANNUAL MEETING OF  
THE ROYAL ASIATIC SOCIETY OF BENGAL, ON THE  
15TH FEBRUARY, 1937.

### 1. CHINTAHARAN ('HAKRAVARTI.

#### *Illustrated Old Indian Manuscripts and Manuscript Covers.*

(1) Aṣṭasāhasrikūprajñāpāramitā (R.A.S.B.—Cat. No. 2)—a Buddhist work copied in the 6th year of Mahīpāla (11th century).

(2) Aṣṭasāhasrikūprajñāpāramitā (R.A.S.B.—Cat. No. 3) copied in N.S. 268 (1148 A.D.).

(3) Aṣṭasāhasrikūprajñāpāramitā (R.A.S.B.—Cat. No. 7) copied in the 18th year of Govindapāla (12th century).

(4) Pañcarakṣā (R.A.S.B.—Cat. No. 77)—a Buddhist work copied in Śaka 1211 (1289 A.D.).

(5) A Mahāyānasūtra (R.A.S.B.—Cat. No. 39).

(6) A manual of Buddhist rituals (R.A.S.B.—Cat. No. 102) copied in N.S. 693 (1573 A.D.).

(7) A fragment of a work of Buddhist incantations (R.A.S.B.—Cat. No. 46) copied in N.S. 933 (1813 A.D.).

(8) Bhaktāmarastotra of the Jains (R.A.S.B.—No. 1545) of which each verse is illustrated with a full-page illustration.

(9) Pictures of the twenty-four Jain Tirthaṅkaras (R.A.S.B. No. 1544).

(10) Yantrendraprakāśa of Maheśvara containing illustrations of the constellations (Indian Museum MS. No. 3733).

(11) Sarvadarśanasamgraha (Indian Museum MS. No. 3735-6)—a book of omens containing illustrations of various objects.

(12) Painted covers of manuscripts belonging to the Vaidya Sāhitya Pariṣat illustrating incidents in the life of Lord Kṛṣṇa, e.g., sucking the breast of mother Yaśodā, playing on the flute with friends, pacifying Rādhā, female attendants waiting on Rādhā and Kṛṣṇa.

### 2. B. S. GUHA.

#### *Wooden Effigies of the Red Kaffirs of the Hindukush Mountains.*

Two wooden effigies brought by Dr. Guha in 1929 from the village of Kunisht in the Rampur valley (Chitral). These were erected in memory of a distinguished Red Kaffir warrior and a notable lady by the Red Kaffirs of Kunisht.

### 3. ARCHÆOLOGICAL SURVEY OF INDIA.

#### *Painted pottery from Nal, Baluchistan (c. 3000 B.C.).*

These vases come from the mound of Sohr Damb near the village of Nal, situated in the Jhalawan District of the Kalat State of Baluchistan. All the wares are wheel-made. The clay is usually fine, mostly light red in colour and well mixed, and the bulk of the pottery is pale or dark buff, straw-coloured, or of greenish hue. The

designs are applied in brown or sepia or black, and filled in after firing with blue, green, red, yellow or white, some of its linear patterns recalling those of the Susa I pottery. Most of these polychrome vases were found deposited in prehistoric burials and excavated by the Archaeological Department. After discovery they were sent to the McMahon Museum, Quetta, from where they have been transferred to the Indian Museum, Calcutta, after the recent earthquake.

#### 4. GEOLOGICAL SURVEY OF INDIA.

##### I. *The ferro-alloys.*

Certain metals—manganese, nickel, chromium, tungsten, molybdenum, vanadium and, quite recently, beryllium—are used to form special alloys with steel, and for this reason are known as the ferro-alloys. Each of these gives to steel special properties, so that they are almost indispensable in modern metallurgical and engineering practice. Except for manganese, chromium and perhaps nickel, the total amount of these metals available throughout the earth's crust is small, and within a century there is little doubt that most of our resources will have been entirely depleted. However, some of them are more or less interchangeable so far as certain properties are concerned, and research is even now demonstrating the possibility of using more common elements, particularly the alkalis as well as calcium and magnesium, as substitutes.

The specimens exhibited show the principal ores of the ferro-alloys.

*Manganese*.—The ores of manganese are mainly psilomelane ( $\text{H}_4\text{MnO}_3$ ) and pyrolusite ( $\text{MnO}_2$ ), but there are numerous other manganese minerals. At the present day the principal producing countries are Russia, with an annual out-turn of nearly 2 million tons, India with about 700 thousand tons, and the Gold Coast with 500 thousand to 18. In India manganese-ore is obtained mainly from the Central Provinces and Singhbhum.

Manganese has a two-fold use in metallurgy. Low grade ore, high in iron, is used in cast-iron smelting as a deoxidiser. Alloyed with steel it imparts toughness and resistance to abrasion to the metal. Manganese steels are particularly used for wheels, axles, tyres, springs and armour piercing projectiles.

*Nickel*.—The nickel ores consist of several nickel sulphide minerals, chief of which are pentlandite, millerite, gersdorffite and smaltite. Over 90 per cent. of the world's supply of nickel comes from Sudbury, in northern Ontario, Canada, a certain amount comes from New Caledonia, and a little is obtained as a bye-product from the treatment of the lead-zinc-copper ores of Bawdwin, Burma. Recently a new occurrence has been found in Finland.

The importance of nickel as a ferro-alloy is, perhaps, not so great as formerly, most of it being now used alloyed with copper (monel metal) or in nickel plating. Nickel increases the tensile strength of steel and also its resistance to shock. The chromium-steel alloy '18-8' contains 8 per cent. of nickel.

*Chromium*.—The sole ore for chromium is chromite ( $\text{FeCr}_2\text{O}_4$ ). The principal producing countries are Southern Rhodesia, Transvaal, Turkey, Russia, Cuba, New Caledonia and India.

In India chromite is obtained from Baluchistan, Mysore and Singhbhum.

Low grade chromite, 35–47 per cent.  $\text{Cr}_2\text{O}_3$ , is used as a refractory material for lining furnaces. High grade chromite, 48–54 per cent.  $\text{Cr}_2\text{O}_3$ , is used for the manufacture of ferro-chrome which is added directly to the steel melt in making special steels. These steels, especially with some nickel also present, have remarkable anti-corrosive properties.

*Tungsten*.—There are two ores of tungsten: wolfram,  $(\text{FeMn})\text{WO}_4$ , and scheelite,  $\text{CaWO}_4$ , the former being much the more common. Most of the world's supply comes from China, but Burma is responsible for a considerable production. Before the war all tungsten ores had to be sent to Germany for treatment. At the commencement of the war Germany had six months' supplies whilst we had to work out the method of treating the ore. Germany attempted to obtain molybdenite from Norway as a substitute, but by paying a high rate the Allies blocked even these supplies from Germany.

The effect of tungsten on steel is an increase of hardness and strength. Certain special cutting tools are of tungsten steel. Tungsten carbide is manufactured into extremely hard cutting tools.

*Molybdenum*.—The sole ore for molybdenum is molybdenite ( $\text{MoS}_2$ ). Almost the whole of the world's supply now comes from two mines, the Climax mine in Colorado and the Copper Creek mine in Arizona. A little is occasionally produced in Norway and Australia, and should the necessity arise, some could be obtained from Burma. Molybdenum can take the place of tungsten in steels to some extent, as it imparts similar properties. It assists resistance to corrosion at high temperatures.

*Vanadium*.—There are quite a number of vanadium-bearing minerals. The principal production is from Southern Rhodesia, South-west Africa and Peru. The production is very irregular as the demand for steel purposes is small. Recently, in India, certain iron-ores containing up to 5 per cent. of vanadium have been found, in Singhbhum and Mayurbhanj.

Vanadium steels are extremely tough and are used for high speed purposes. Their use would undoubtedly increase if obtainable at a lower cost.

*Beryllium*.—There is only one workable ore-mineral for beryllium-beryl. So far India has been the biggest producer of this mineral with 799 tons between 1932 and 1935 from Ajmer, but recent information indicates that larger quantities will shortly be mined in U.S.A. The use of beryllium in certain alloys have only recently become known. Owing to its rarity, the metal is very costly.

Beryllium is said to increase the tensile strength of steel enormously: certain alloys have been made with a tensile strength of 250,000 lbs. per square inch.

## II. Series of specimens and diagrams illustrating the evolution of cephalopods.

The cephalopods, a group of marine invertebrates, illustrate in a graphic manner two interesting phases in their evolutionary history. In the earlier PROGRESSIVE phase the simple straight conical forms gradually assume, through various intermediate stages, a highly coiled form. In the later or RETROGRESSIVE phase (i.e. phase of senility) the process of coiling is reversed so that the geologically later genera assume forms that are characteristic of the earlier genera.

(1) The earlier cephalopods are simple, nearly straight forms as in *Orthoceras* and *Bactrites*. These are designated ORTHOCONES in the Nautiloids and BACTRICONES in the ammonoids.

(2) A later stage in coiling is represented in *Cyrtoceras*, in which the cone becomes slightly curved and constitutes the CYRTOCONE. This stage has not been found in the ammonoids.

(3) The slightly coiled *Cyrtoceras* stage is superseded by a more coiled form (the individual coils still remaining separate) and is found in *Gyroceras* and *Mimoceras*. These represent the GYROCONES and MIMACONES respectively.

(4) The tendency to coil persists to such an extent that gradually each successive coil overlaps the other, till finally the last whorl completely covers all the previous ones, as, for example, in *Nautilus* and many ammonoid genera. These constitute the NAUTILICONES and AMMONITICONES respectively.

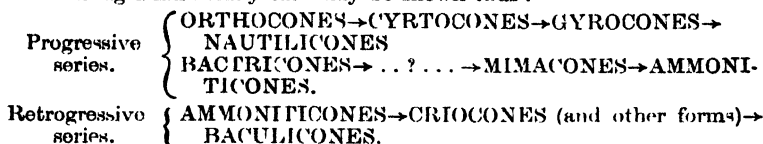
After this stage begins a tendency to uncoil and is best illustrated in the ammonoids, the majority of the nautiloids having become extinct.

(5) The uncoiling of Ammoniticones leads to the stage represented in such genera as *Spiroceras* and *Crioceras* and may be called the CRIOCONE. It represents a stage corresponding to the GYROCONES and MIMACONES of the progressive series.

(6) Other stages in uncoiling are represented by the genera *Scaphites*, *Ancyloceras* and *Hamites*. No particular name has been given to these.

(7) The final stage is a simple, almost straight cone, as in *Baculites*, and may be called the BACULICONE. This corresponds to the earlier ORTHOCONES or BACTRICONES of the nautiloids and the ammonoids respectively.

Diagrammatically this may be shown thus :



### III. Specimens and photographs of the oldest fossils from India.

These specimens are the oldest fossils so far discovered in India. They are small, irregularly circular, lens shaped bodies with a covering of carbonaceous film. They have been identified as plants by some experts and as animals by others. They have even been regarded as of inorganic origin.

### IV. Micro-structures of fossils.

The specimens, thin sections and photographs illustrate the internal and external structures of certain small organisms—the Foraminifera. The Foraminifera are interesting because they show two entirely different types of individuals in the same species, each type reproducing the other.

The larger discoidal forms give rise to the small conical forms which in turn reproduce the discoidal forms. The same process is then repeated.

### V. Casts of the skulls of fossil Man.

*Rhodesian Man*, found in Northern Rhodesia. It has features which seem to indicate that this was nearer to the Chimpanzee and Gorilla than was Neanderthal Man.

*Piltdown Man*, found in Sussex, England, possesses a skull almost as well developed as that of modern Man, but has a jaw which is like that of an Anthropoid ape.

*Peking Man*.—Five more complete skulls of this species have very recently been found in China. It probably occupies an intermediate position between *Pithecanthropus* and Neanderthal Man.



## 5. THE GENERAL SECRETARY.

### (1) *The Society's publications of 1936.*

- (a) *Bibliotheca Indica.*
- (b) *Journal.*
- (c) *Proceedings, Indian Science Congress.*

### (2) *Some recent publications by Members of the Society.*

- (a) Bimala Churn Law : *Śrāvasti in Indian Literature.* Delhi, 1935.
- (b) Chintaharan Chakravarti : *A Descriptive Catalogue of the Sanskrit Manuscripts in the Vangiya Sahitya Parishat.* Calcutta, 1935.
- (c) Ramaprasad Chanda : *Medieval Indian Sculpture in the British Museum.* London, 1936.
- (d) R. N. Chopra : *A Hand-book of Tropical Therapeutics.* Calcutta, 1936.
- (e) S. M. Jaffar : *Education in Muslim India, Peshawar City,* 1936.
- (f) S. K. Bhuyan : *Tungkhungia Barunji.* Calcutta, 1933.
- (g) B. Prashad : *Animal Remains from Harappa.* Delhi, 1936.
- (h) A. G. Shirreff : *Hindi Folk-songs.* Allahabad, 1936.

## ANNUAL REPORT FOR 1936.

The Council of the Royal Asiatic Society of Bengal has the honour to submit the following report on the state of the Society's affairs during the year ending the 31st December, 1936.

### 1. Royal Title.

During the year His Majesty the King Emperor has been graciously pleased to grant permission to the Society to use the title 'ROYAL' before its name, and the Society therefore will henceforth be known as the 'ROYAL ASIATIC SOCIETY OF BENGAL'.

### 2. Ordinary Members.

*Gains and losses.*—These were as follows during the year :—

<i>Gains.</i>		<i>Losses.</i>	
Elections carried forward ..	7	Elections carried over ..	13
New elections ..	38	Applications withdrawn ..	3
		Elections lapsed ..	3
		Deaths ..	6
		Resignations ..	20
		Rule 38 ..	3
		Rule 40 ..	7
TOTAL ..	45	TOTAL ..	55

Initial total 425; net loss 10; final total 415.

*Rule 38.*—This Rule, dealing with members whose subscriptions are in arrears, was strictly applied and the names of 3 Members were subsequently removed from the roll for this cause.

*Membership List.*—The customary detailed cross-check of the membership lists with the membership card index was made at the end of the year.

*Non-resident Members.*—Their total at the end of the year was 106, leaving more than ever room for substantial expansion.

*Life-members.*—The total of our Life-members has decreased by one and now stands at 55. Three were lost by death; and two Ordinary Members compounded during the year.

*Deaths.*—This year the loss to the Society by death has been less heavy than the year before. Amongst the distinguished and especially valued members lost to us, whose memory will be cherished, and for whose departure the Society is the poorer, the following may be mentioned :—

Sir R. N. Mookerjee (Life-member, 1898 and Honorary Fellow, 1929).

Rev. Sir N. D. Boatson-Bell (Life-member, 1895).

Dr. A. C. Woolner (Life-member, 1906 and Ordinary Fellow, 1927).

Lt.-Col. R. Knowles (Ordinary Member, 1920 and Ordinary Fellow, 1927).

### **3. Associate Members.**

During 1936 no new Associate Members were elected, and none amongst those on the roll were lost.

The present number stands at 5 ; statutory maximum 15.

### **4. Special Anniversary Honorary Members.**

Our eleven Special Anniversary Honorary Members have remained with us.

### **5. Institutional Members.**

During the year the following new institutions were admitted to this class of membership :—

The Principal, Islamia College, Peshawar.

The Principal, Patna College, Patna.

The President, Forest Research Institute, Dehra Dun.

Their total number is 10.

### **6. Ordinary Fellows.**

At the Annual Meeting held on the 3rd February, 1936, the following Members were elected Ordinary Fellows :—

Dr. S. K. Chatterji.

Dr. A. M. Heron.

N. G. Majumdar.

Nawab Habib-ur-Rahman Shirwani.

We lost through death the following two Ordinary Fellows :—

Lt.-Col. R. Knowles (1927).

Dr. A. C. Woolner (1927).

At the end of 1936 the number of Ordinary Fellows was 46 ; statutory maximum 50.

### **7. Honorary Fellows.**

During the year no scholars were newly elected Honorary Fellows, and the following three distinguished Honorary Fellows were lost by death :—

Dr. C. Snouck Hurgronje (1927).

Sir Rajendra Nath Mookerjee (1929).

Dr. Charles J. H. Nicolle (1929).

Their number at the end of the year was 21 ; statutory maximum 30.

### 8. Obituary.

During the year the Society received to its great regret news of the death of the following distinguished relations :—

Major H. Brown (An Ordinary Member, from 1924 to 1930).

Mr. S. N. Mallik, C.I.E. (An Ordinary Member, from 1928 to 1930).

Sir Alexander Stow (An Ordinary Member, from 1923 to 1934).

### 9. Condolences.

The Council expressed condolences to the relatives of the following distinguished personality deceased during the year :—

Sir R. N. Mookerjee, K.C.I.E., K.C.V.O., an ex-President, Life-member and Honorary Fellow of the Society.

### 10. Council.

The Council met 11 times during the year. The attendance averaged 12 of the 20 component members.

The following resolutions of thanks were passed by the Council :—

To His Majesty the King Emperor for granting permission to use the title 'Royal' by the Society.

To Mr. D. C. Ghose for presenting to the Society a portrait of the late Sir C. C. Ghose.

To the retiring Members of Council and specially to the President, Sir L. L. Fernor, for the way in which they had served the true interests of the Society during the period of their Council Membership

To Mr. M. N. Mukherjee, B.E., for supervising and for giving valuable advices in connection with the repairs to the roof of the Society's building.

### 11. Office Bearers.

The changes in the Council during the year were as follows :—

Sir U. N. Brahmachari, Acting General Secretary, *vice* Mr. Johan van Manen, absent, from 16-5-36 to 16-11-36.

Mr. Percy Brown, Acting Library Secretary, *vice* Dr. A. M. Heron, absent, from 1-8-36 to 27-11-36.

Mr. Johan van Manen, Acting Honorary Treasurer, *vice* Dr. S. L. Hora, absent, from 24-1-36 to 7-2-36; from 16-11-36 to 24-11-36 and from 16-12-36 to 31-12-36.

Absences other than those mentioned above were :—

H.E. Sir John Anderson, absent from 8-4-36 to 1-8-36 and from 1-9-36 to 3-11-36.

Sir David Ezra, absent from 16-4-36 to 1-11-36.

Sir B. L. Mitter, absent from 15-4-36 to 14-8-36.

Lt.-Col. R. Knowles, died on 3-8-36.

Dr. B. Prashad, absent from 20-5-36 to 1-7-36.

Dr. J. N. Mukherjee, absent from 19-10-36 to 14-11-36.

Dr. M. H. Hosain, absent from 25-9-36 to 25-10-36.

R.B. R. Chanda, absent from 1-4-36 to 10-5-36.

Bt.-Col. R. N. Chopra, absent from 15-4-36 to 15-8-36.

Mr. M. Mahfuz-ul Haq, absent from 5-6-36 to 1-7-36.

Mr. C. C. Calder, absent from 10-5-36 to 1-11-36.

Mr. K. C. Mahindra, absent from 18-4-36 to 1-11-36.

## 12. Committees of Council.

The standing Committees of Council during the year, namely, the Finance, Publication, and Library Committees, met monthly.

During the year a sub-committee consisting of the Philological Secretary, the Joint Philological Secretary, the General Secretary and Lt.-Col. N. Barwell, was appointed for the revision of the regulations for the lending of manuscripts.

## 13. Finance Committee.

The Finance Committee continued during the year to meet on dates different from, and a few days prior to, those of the Council Meetings.

A Special Meeting to frame the budget for the next year was held in December.

## 14. Office.

*Staff.*—Towards the close of the year Babu Probodh Chandra Deb, Despatching clerk of the Society, who had been ill, died and Mr. A. Michael was placed in charge of the despatching work.

*Subordinate Staff.*—In the subordinate staff the usual minor changes took place, which do not call for comment.

*Correspondence.*—This year the number of outgoing letters was 1,751 and that of incoming letters 2,859.

*Files.*—During the year intermittent work was continued with regard to our files, old and new, but not much real progress can be reported.

*Stock-room.*—Labelling, bundling, and registration of the contents of the stock-room were kept up-to-date during the year for new publications. The stock-books for new accessions and for sales were kept up.

*Distribution.*—No change was made in the mode of distribution of our periodicals and notices. A better system for the distribution of the free copies of the *Bibliotheca Indica* should be devised.

*Addresses.*—Printed address labels remained in use and the system of constant revision and addition which has been adopted enables us to keep the printed addresses up-to-date, month by month.

*Card Register.*—The card registers of the Society's membership and of that of the Indian Science Congress were kept up-to-date and checked at the close of the year.

*Circulars and Forms.*—The number of these printed during the year was 74. About Rs.1,042 were expended under this head.

### 15. Rules and Regulations.

During the year no changes were made in the Rules and Regulations of the Society.

### 16. Indian Science Congress.

*Twenty-third Session.*—The Twenty-third Annual Meeting of the Indian Science Congress was held in Indore, from January 2nd to January 8th, 1936. under the patronage of His Highness Maharajadhiraj Raj Rajeshwar Sawai Shree Yeshwant Rao Holkar Bahadur, G.C.I.E., Maharaja of Indore.

*President.*—Rai Sir U. N. Brahmachari Bahadur, Kt., M.A., M.D., Ph.D., F.S.M.F., F.A.S.B., F.N.I., was President of the Congress.

*Proceedings.*—The Proceedings of the Congress were published during the first week of October. The publication contained 674 pages and 3 plates which was 42 pages of letter-press and 3 plates more than the year before. The number of abstracts sent in for reading to the Congress numbered this year 570 as against 776 last year.

*Administration.*—During the latter months of the year the usual administrative work for the Congress in connection with the next session (Twenty-fourth Congress), to be held in Hyderabad, Deccan, was performed by the Society's office, which also attended to the general administration of the Congress when this was not in session. This year the burden of work thrown on the Society's office was as heavy as usual.

*Programme and Abstracts.*—As in the previous years the programme of the meeting and the abstracts were sent, as far as practicable, by post to all members who had applied for membership before the date of their publication. This year this date was again late, the 17th December.

*Finance.*—The Congress finances remained separate from those of the Society.

*Secretaries.*—The General Secretaries to the Congress were Dr. J. N. Mukherjee and Mr. W. D. West; and the Managing Secretary was Mr. Johan van Manen in his quality of General Secretary of the Society.

### 17. Indian Museum.

The Society's representative on the Board of Trustees of the Indian Museum, under the Indian Museum Act, X of 1910, continued to be Rai Sir Upendra Nath Brahmachari Bahadur, Kt.,

who was re-appointed as such for a further period of three years.

### 18. Kamala Lectureship.

The Society's nominee to serve on the Election Committee of the Kamala Lectureship, administered by the Calcutta University, remained the same, Rai Sir Upendra Nath Brahmachari Bahadur, Kt.

### 19. National Institute of Sciences of India.

The Society's representatives to serve on the Council of the National Institute of Sciences of India remained the same, Bt.-Col. R. N. Chopra and Mr. C. C. Calder.

### 20. Deputations.

During the year the Society received no invitations from any learned institutes to send representatives at special functions.

### 21. Honours.

Amongst the Honours conferred during the year several were bestowed on members of the Society. Mr. Justice John Lort-Williams, Mr. B. C. Burt, Mr. G. R. Campbell received the honour of Knighthood. Sir N. N. Sircar was made a K.C.S.I. Maharaja Sir P. C. Tagore a K.C.I.E. Mr. Ghulam Yazdani a member of the O.B.E.

### 22. Congratulations.

The Society sent its cordial congratulations to the following :—

To Dr. B. Sahni, at the occasion of his being elected a Fellow of the Royal Society.

To Dr. H. E. Stapleton, at the occasion of his receiving the degree of Doctor of Literature from the University of Oxford.

Congratulations were also sent to several of the above recipients of Civic Honours.

### 23. Visits.

An appreciable number of distinguished visitors came to the Society during the year. Amongst them were scholars from Japan, France, Hungary, Hawaii, Poland, England and the United States of America.

## **24. Social Functions.**

A social function was held in the rooms of the Society on Friday, the 14th August, 1936, when H.E. the Governor of Bengal unveiled the portrait of the late Sir C. C. Ghose, an ex-President of the Society.

The Society also continued the practice of providing light refreshments to the Members and visitors present before the Ordinary Monthly Meetings.

## **25. Elliott Prize for Scientific Research.**

The annual prize for 1935 for research in Geology and Biology (including Pathology and Physiology), was, in the Annual Meeting of 1936, awarded to Mr. Kalipada Biswas.

The prize offered for the year 1936 was for Mathematics. No paper was received to compete for this prize.

The prize for next year, 1937, will be for research in Chemistry.

## **26. Barclay Memorial Medal.**

The (biennial) award of the Barclay Memorial Medal for 1935 was announced in the Annual Meeting of 1936. The medal was bestowed on Dr. Birbal Sahni.

The next award will be announced in the Annual Meeting of 1938.

## **27. Sir William Jones Memorial Medal.**

The next (triennial) award of the Sir William Jones Memorial Medal, for 1937, for Asiatic researches in Philosophy, Literature and History will be announced in the Annual Meeting of 1938.

## **28. Annandale Memorial Medal.**

The (triennial) award, for important contributions to the study of Anthropology in Asia, will be announced in the Annual Meeting in February, 1937.

## **29. Joy Gobind Law Memorial Medal.**

The (triennial) award of the medal for conspicuously important work on Zoology in Asia, for 1935, was made to Prof. Lew Semenowitch Berg, Chief of the Bureau of Applied Ichthyology and Professor of Geography, State University, Leningrad.

The next award will be announced in the Annual Meeting of 1939.



**30. Paul Johannes Brühl Memorial Medal.**

The next (triennial) award for important contributions to the study for Asiatic Botany will be announced in the Annual Meeting of 1938.

**31. Calcutta Indian Science Congress Prize.**

The next award of the prize is to be made in connection with the next Session of the Congress to be held in Calcutta.

**32. Pramatha Nath Bose Memorial Medal.**

Rules for the triennial award having been framed and passed by Council, the Council will now determine the first year of bestowal.

**33. Society's Premises and Property.**

A sum of Rs.2,000 was set aside during the year to be credited to the Building Repairs Fund.

Necessary repairs to the roof were effected during the year.

During the year also, a complete re-wiring of our premises was effected at a cost of about Rs.1,200.

The various desiderata and problems existing under the heading Premises and Property have been mentioned in the Annual Reports of the last few years and have to be kept in mind until realization.

**34. Accommodation.**

Old problems to be carried over as still needing attention are : the provision of a set of small rooms for various uses, and the shelving of the stock-rooms as well as extension of shelving for the Library. A new problem is consequent on the receipt of 12,000 Sanskrit manuscripts made over to the Society as a permanent loan by the Government of India.

**35. Artistic and Historical Possessions.**

Mr. D. C. Ghose presented to the Society a portrait of the late Sir C. C. Ghose, an ex-President of the Society. This striking work of art, painted by Mr. Atul Bose, has been gratefully accepted by the Society and has been hung in the Society's North Landing.

**36. Presentations, Donations, and Legacies.**

Except for the presentations mentioned under the previous heading and those to be mentioned under the next, no presentations were received during the year.

### 37. Library.

*Permanent Library Endowment Fund.*—The fund received no further donation during the year. The total invested capital remained (face value) Rs.14,000, in  $3\frac{1}{2}$  per cent. Government paper. The accumulated interest will permit the purchase of one further paper to the face value of Rs.1,000 during next year.

*Accessions.*—The accessions to the library during the year, exclusive of about 200 periodicals received through exchange or otherwise, numbered 237 volumes, out of which 127 were purchased and 110 were acquired by presentation.

*Binding.*—During the year 481 units, including books, pamphlets, and periodicals, were bound at a cost of Rs.613, out of a total budget allowance of Rs.600 sanctioned for the purpose.

*Purchases.*—The allocation for the purchase of books for the year was Rs.2,500, but actually an amount of Rs.2,197 was spent.

*Shelving.*—Installation of special steel shelving for manuscripts and books in the western section remains to be effected, and provision has also to be made for further steel shelving for the current accessions of periodical literature. Our available shelving space for printed books is also rapidly coming to an end.

### 38. Finance.

(1) Appendix III contains the usual statements showing our accounts for 1936. No change has been made in the form of their presentation since the previous year.

(2) One statement, still carried over, is :

Statement No. 17. International Catalogue for Scientific Literature, London.

(3) The other statements are presented as in the previous year.

(4) The fund accounts again show their invested assets written down to the market values as at the end of the year, and Investment Account No. 25 shows the allocation of invested paper to each fund specifically, whilst both market and face values of the investments are shown in it.

(5) Statement No. 27 shows the Balance Sheet of the Society and the different funds administered by and through it.

(6) The funds belonging to, or administered by, the Society may be classified as follows :—

(a) General Fund.

(i) Permanent Reserve.

(ii) Working Balance.

(b) Specific Funds belonging to the Society.

(c) Funds administered by the Society.

At the end of the year, the position of these funds, as compared with their position at the end of 1935 was as follows :—

		Face Value.	Market Value.	Face Value.	Market Value.
		31st Dec., 1935.	31st Dec., 1935.	31st Dec., 1936.	31st Dec., 1936.
		Rs.	Rs.	Rs.	Rs.
1. General Fund	..	2,88,600	2,75,400	2,78,700	2,91,000
(a) Permanent Reserve		2,52,000	2,40,900	2,53,200	2,65,500
(b) Working Balance		36,600	34,500	25,500	25,500
2. Specific Funds belonging to the Society	..	59,000	58,500	80,000	80,000
3. Funds administered by the Society	..	39,500	38,500	27,600	27,600
		3,87,100	3,72,400	3,86,300	3,98,600

(7) During the year Rs.832 were received through admission fees. Two ordinary members compounded their subscriptions to a total of Rs.388. Two new Institutional members, one with effect from 1st January, 1937, were admitted. The fees of Rs.100, together with the above amounts less a sum of Rs.30-9 cash advance which was brought forward from 1935, under this head aggregating to Rs.1,289-7 was transferred to the Permanent Reserve in the usual manner by conversion at the market rates as on 31st December, 1936, of Government 3½% Paper to the Face Value of Rs.1,200 belonging to the Temporary Reserve of the working balance, whilst a cash balance of Rs.78-7 is being carried over to the ensuing year, for adjustment under this head.

(8) The Government of Bengal maintained the 20% cut in all grants made by them to the Society during the year.

The Society received the following grants from the above Government :

	For	Rs.	Statement.
Journals	.. ..	1,600	1
O.P. Fund No. 1	.. ..	7,200	2
O.P. Fund No. 2 (for 1935-36 and 36-37)	.. ..	4,800	3
Sanskrit MSS. Fund	.. ..	2,880	4
Do. do.	.. ..	2,560	4

19,040

(9) The income derived from advertising during the year amounted to Rs.9,600.

(10) The temporary investments of funds in Fixed Deposit and Savings Bank are shown in Statement Nos. 22, 23 and 24.

(11) Statement No. 20 gives an account of the amounts due to and by the Society for membership subscriptions, sales of publications and contingent charges.

(12) The Government Securities shown in Statement No. 25 are held in safe custody by the Imperial Bank, Park Street Branch. During the year, there was a substantial appreciation of the Securities amounting to Rs.15,623 increasing to that extent the book assets of the Society.

(13) Municipal assessment. For the fourth time in succession the Corporation has enhanced the Assessment on the Society's premises.

The enormous increase demanded has been reduced through the intervention of a taxation expert engaged by the Society. The municipal taxation is becoming a menace to the Society's life.

(14) The budget estimates for 1936 and the actuals for the year were as follows :—

Estimates.			Receipts.	Expenditure.
			Rs.	Rs.
Ordinary	..	..	54,500	54,500
Extraordinary	..	..	1,000	1,000
TOTAL			55,500	55,500
Actuals.				
Ordinary	..	..	52,368	52,152
Extraordinary	..	..	1,270	1,270
TOTAL			53,638	53,422

The ordinary income was about Rs.2,132 less than estimated.

On the expenditure side about Rs.2,348 was expended less than the estimate.

(15) The year's working shows an increase in the net balance to the extent of Rs.26,132 as compared to that of last year, taking into account the appreciation of our investments which amounted to Rs.15,623.

(16) The budget estimates for probable expenditure have as usual been framed to meet demands under various heads based on vigorous activity in all departments of the Society's work.

The receipts have been conservatively estimated.

## BUDGET ESTIMATES FOR 1937.

## Ordinary Receipts.

	1936 Estimate.	1936 Actuals.	Budget Estimates for 1937.
	Rs.	Rs.	Rs.
Interest on Investments and Deposits {	10,000	10,011	10,000
	700	781	700
Advertising .. .. .	9,600	9,600	9,600
Annual Grant .. .. .	1,600	1,600	1,600
Donation .. .. .	....	....	....
Miscellaneous .. .. .	300	233	300
Members' Subscriptions .. .. .	10,000	9,313	9,500
Publications, Sales and Subscriptions	5,000	3,930	4,000
Proportionate Share of Funds ..	7,000	7,000	7,000
Indian Science Congress Contribution	1,000	600	600
Rent .. .. .	9,300	9,300	9,300
<b>TOTAL ..</b>	<b>54,500</b>	<b>52,368</b>	<b>52,600</b>

## Ordinary Expenditure.

	Rs.	Rs.	Rs.
Salaries and Allowances .. ..	31,500	31,088	31,500
Commission .. .. .	350	240	300
Stationery .. .. .	500	304	400
Fan, Light and Telephone .. ..	800	770	800
Taxes .. .. .	2,250	2,328	2,350
Postage .. .. .	1,500	1,236	1,400
Freight .. .. .	....	....	....
Contingencies .. .. .	800	733	750
Petty Repairs .. .. .	100	50	50
Insurance .. .. .	500	500	500
Menials' Clothing .. .. .	200	163	100
Office Furniture .. .. .	450	35	200
Building Repairs .. .. .	2,000	2,000	2,000
Provident Fund Share .. .. .	700	685	700
Audit Fee .. .. .	250	250	250
Books, Library .. .. .	2,500	2,197	2,500
„ (Special Grant) .. .. .	....	....	....
Binding, Library .. .. .	600	614	600
Journal and Memoirs .. .. .	6,000	4,567	6,000
Printing, Circular .. .. .	800	1,042	1,000
Honorarium to General Secretary ..	....	2,500	....
Bonus to R.A.S.B. Staff for Congress work .. .. .	....	150	....
Permanent Reserve .. .. .	1,500	....	....
Replacement of fans .. .. .	1,200	....	1,200
Legal Fees .. .. .	....	700	....
<b>TOTAL ..</b>	<b>54,500</b>	<b>52,152</b>	<b>52,600</b>

**Extraordinary Receipts.**

	1936 Estimate.	1936 Actuals.	Budget Estimates for 1937.
By Fees	Rs.	Rs.	Rs.
by Admission Fees .. ..	650	832	650
by Compounding Fees .. ..	300	388	300
by Institutional Membership Registration Fees .. ..	50	50	50
TOTAL ..	1,000	1,270	1,000

**Extraordinary Expenditure.**

	Rs.	Rs.	Rs.
To Permanent Reserve			
by Admission Fees .. ..	650	832	650
by Compounding Fees .. ..	300	388	300
by Institutional Membership Registration Fees .. ..	50	50	50
TOTAL ..	1,000	1,270	1,000

**39. Publications.**

*Journal*.—Of the *Journal*, Volume I for 1935, two numbers, consisting of 278 pages and 3 plates to close the volume, and Volume II for 1936, three numbers, consisting of 224 pages and 9 plates were issued. The title-pages and index for Volume I were also published.

Of the *Journal*, Old Series, Volume LXXV, set aside for the 'Flora of the Malayan Peninsula', Part V, consisting of 78 pages was issued to complete the volume. The title-pages for this volume were also published.

In all 580 pages and 12 plates were published during the year.

*Indian Science Congress*.—The *Proceedings* of the 23rd Indian Science Congress, consisting of 674 pages and 3 plates, were published during the year.

*Sales*.—A sum of Rs.3,930 was realized, being Rs.1,070 below the budget estimate.

*Expenditure*.—The expenditure on the *Journal* was about Rs.4,275.

*Advance Proceedings*.—Four issues were published during the year.

*Year-Book*.—The *Year-Book* for 1935 is practically complete in print and will be issued early in the present year.

#### 40. The Baptist Mission Press.

Under the capable superintendence of Mr. P. Knight the Baptist Mission Press continued to act as our chief printers and again gave invaluable assistance and maintained closest co-operation.

#### 41. Agencies.

Our European and Indian Agents remained the same throughout the year. An extension of the list for Asiatic countries is desirable.

#### 42. Exchange of Publications.

During the year, the following applications for exchanges with the Society's publications were considered by the Council, with the decisions as noted against them :—

<i>Publications of :</i>	<i>To be exchanged with :</i>
Toyo Bunko, Tokyo, Japan	.. <i>Journal</i> (Science and Letters).
Trivandrum Public Library	.. Sanskrit publications.

#### 43. Meetings.

The Ordinary Monthly Meetings of the Society were held regularly every month, with the exception of August and the recess month of October. The recorded average attendance was 16 members and 3 visitors. The maximum attendance was in January with 26 members and 8 visitors.

Seven meetings of the Medical Section were held during the year.

#### 44. Exhibits.

In the Ordinary Monthly Meetings a number of exhibits were shown and commented upon by the exhibitors. The following may be mentioned :—

M. Mahfuz-ul Haq : A note on a rare MS. of al-Aghrād-al Tibbiya.  
J. N. Mukherjee : A brass utensil pierced by hailstone on the 8th March, 1936.

Maharaja Sir P. C. Tagore : Panel representing Sir William Jones translating Shakuntala.

Sunder Lal Hora : Manuscript drawings of Indian fish and other animals recently acquired by the Society.

Baini Prashad : The Rufous-necked Hornbill ; Kabui Naga Cloths.  
N. G. Majumdar : A terracotta toy-cart in the Indian Museum.

Chintaharan Chakravarti : A shorter version of Kaulavaliniraya ;  
Newly acquired MSS. on the cult of Kubjika ; Little known works of two celebrated Tantric Writers.

Percy Brown : A metal Figurine of a Dancer.

Ramaprasad Chanda : Three small brass images from the Chittagong District.

Suniti Kumar Chatterji : An old Hindu Painting on cloth from the Island of Bali ; A set of old Oriya Playing cards.

Johan van Manen : A recent detailed map of Abyssinia ; A pre-historic iron implement from Malacca.

M. Hidayat Hosain : Kharidat al-Qasr ; A Persian stencilled wall-hanging picture said to represent 'Umar Khayyām.

#### 45. Communications.

Apart from papers submitted both for reading and subsequent publication, a number of communications, not intended for subsequent publication, were made from time to time in the Ordinary Monthly Meetings.

Amongst such communications made during the year the following may be mentioned :—

N. Barwell : Influence of Oriental Motifs upon book-bindings in Europe from the 15th to the 18th century.

Johan van Manen : The recent descriptions of Minya Gonkar.

#### 46. General Lectures.

During the year no General Lectures were given.

#### 47. Philology.

Eleven papers were read during the year to be published later.

Five papers read in the previous years were published during the year.

Three papers were read and also published during the year.

#### 48. Natural History : Biology.

Two papers read in the previous year were published during the year.

Two papers were read during the year to be published later.

#### 49. Natural History : Physical Science.

No papers falling under this heading were either communicated to or published by the Society during the year.

#### 50. Anthropology.

Six papers read in the previous years were published during the year.

One paper was read during the year to be published later.



### 51. Medical Section.

During the year seven meetings of the Medical Section were held, as detailed below :—

- January. Speaker : Bt.-Col. R. N. Chopra.  
Subject : Concentration of atebirin in the circulating blood.
- Speaker : R. N. Chaudhury.  
Subject : So-called Mystery Disease.
- February. Speaker : A. C. Ukil.  
Subject : On Bronchiectasis—its etiology, diagnosis, prognosis and treatment.
- Speaker : K. V. Krishnan.  
Subject : The mechanism of hæmolytic in malarial hæmoglobinuria of monkeys.
- March. Speaker : L. E. Napier.  
Subject : On the anemias commonly met with in Calcutta.
- September. Speaker : R. B. Lal.  
Subject : The use of the Entoray Machine as an anti-mosquito measure.
- Speaker : K. V. Krishnan.  
Subject : Synopsis of laboratory studies on the 'Entoray' Lamp.
- October. Speaker : B. M. Das.  
Subject : On a case of Agranulocytosis.
- Speaker : H. E. C. Wilson.  
Subject : Nutritional Survey of School Boys in Calcutta and the Punjab by means of clinical observations, A.C.H. Index of Nutrition, and other measurements.
- November. Speaker : R. W. Linton.  
Subject : Some aspects of variation in the Vibrios.
- Speaker : P. A. Maplestone.  
Subject : On the successful use of cod-liver oil in an intractable skin condition.
- December. Speaker : D. N. Ray.  
Subject : Maggot treatment in surgical therapy.
- Speakers : L. E. Napier and R. N. Chaudhury.  
Subject : A Hospital Case Report.
- Speaker : B. Mukherji.  
Subject : Treatment of cyanide poisoning and the mechanism of action of antidotes.
- Speaker : Sundar Rao.  
Subject : On Fouadin in Filariasis.

### 52. Bibliotheca Indica.

*Works published.*—Actually published were two issues, Nos. 1526 and 1527, of an aggregate bulk of 10 fascicle units of 96 or 100 pages. The details are given in Appendix II to this report.

Of the above issues one constituted a complete volume, namely :—

1. *Ṭabaqāt-i-Akbarī*, English translation, Vol. 2.

*Indian works continued.*—The following works were continued during the year :—

1. *Manusmṛti*, with the commentary of Medhatithi, Sanskrit.
2. *Vaikhānasaśrautasūtram*, text, Sanskrit.
3. *Saundarānandakāvya*m, text, Sanskrit (Second and revised edition).
4. *Ātmātattvaviveka*, text, Sanskrit.

*Islamic works continued.*—In the Islamic Series work was continued on two works, namely :—

1. 'Amal-i-Ṣālih, Persian.
2. *Rubā'iyāt of Umar-i-Khayyām*, Persian.
3. *Āin-i-Akbarī*, English translation.

*New Works.*—The following new work was sanctioned during the year to be taken up early next year :—

1. *Varna-ratnā-kara*.

### 53. Sanskrit Manuscripts.

The Government of India agreed to the permanent loan to the Society of a large collection of about 12,000 Sanskrit manuscripts hitherto preserved by the Archaeological Section, Indian Museum, Calcutta. The Council gratefully accepted the offer and these 12,000 manuscripts were made over to the Society during the year. A handlist of these manuscripts will be prepared in due course.

### 54. Catalogue of Sanskrit Manuscripts.

The work during the year 1936 was concentrated upon the task of revising and making press ready the entire copy for the balance of Volume VIII, on Tantra, with a view to printing it off during the year 1937. This revision was almost completed by the end of the year.

### 55. Arabic and Persian Manuscripts, Search and Catalogue.

The work in this department was steadily pursued.

*Binding.*—The binding and repairing of previously and newly acquired MSS. was continued and 84 MS. volumes were bound during the year, making a total of 1,192 MSS. bound and repaired since the end of 1924.

*Acquisitions.*—During the year seventy-two manuscripts were acquired by purchase at a cost of Rs.197 and six MSS. were acquired by presentation.

*Reference books.*—The collection of Persian and Arabic MSS. catalogues was again added to and its completion continues an object of attention. A number of biographical works of reference were also purchased during the year.

*Catalogue.*—The work on the Arabic Catalogue was steadily pursued and up to 512 pages were print-ordered during the year. The remaining manuscript was revised and will probably be printed off during the coming year.

### 56. Numismatics.

Materials for Numismatic Supplement (for 1935-36) and for the Special Silver Jubilee Number have been received during the year and are in the press under preparation. They will be published next year.

## [APPENDIX I.]

## Membership Statistics.

(As calculated for December 31st, for 30 years.)

YEAR.	ORDINARY.						EXTRA-ORDINARY.				FELLOWS	
	PAYING.			NON-PAYING.			Total Ordinary Members.				Grand Total Membership.	
	Resident.	Non-Resident.	Foreign.	Total.	Absent.	Life.		Centenary Honorary.	Associate.	Institutional.		
1907 ..	174	175	20	369	31	20	51	420	4	12	..	..
1908 ..	181	193	17	391	38	19	57	448	4	13	..	..
1909 ..	183	217	13	413	40	20	60	473	4	14	..	..
1910 ..	209	217	16	442	43	23	66	508	4	14	..	17
1911 ..	200	225	19	444	53	22	75	519	3	14	..	19
1912 ..	203	229	19	451	43	23	66	517	3	13	..	24
1913 ..	200	211	19	430	46	23	69	499	3	14	..	28
1914 ..	191	187	19	397	50	26	76	473	3	14	..	27
1915 ..	171	188	21	380	40	25	65	445	3	15	..	31
1916 ..	145	159	18	322	60	25	85	407	3	15	..	33
1917 ..	150	144	15	309	45	24	69	378	2	12	..	35
1918 ..	153	145	17	315	43	24	67	382	2	10	..	39
1919 ..	141	128	15	284	64	25	89	373	2	11	..	36
1920 ..	161	134	15	310	32	26	58	368	2	11	..	38
1921 ..	160	132	16	308	26	26	51	359	2	12	..	40
1922 ..	160	141	16	317	26	26	52	369	2	13	..	39
1923 ..	147	120	13	280	30	27	57	337	2	11	..	37
1924 ..	209	134	12	355	29	28	57	412	2	12	..	37
1925 ..	263	137	12	412	23	27	50	462	2	12	..	34
1926 ..	319	162	20	501	23	28	51	552	2	12	..	34
1927 ..	328	167	18	513	28	33	61	574	2	13	..	38
1928 ..	344	167	23	534	42	46	88	622	1	12	..	40
1929 ..	331	181	21	533	36	49	85	618	1	10	2	43
1930 ..	291	194	37	522	22	52	74	596	1	8	2	47
1931 ..	228	184	29	441	26	52	78	519	1	8	5	46
1932 ..	222	126	23	371	27	54	81	452	1	7	5	45
1933 ..	194	126	27	347	33	56	89	436	..	7	6	49
1934 ..	217	112	30	359	26	57	83	442	..	6	7	47
1935 ..	206	107	28	341	28	56	84	425	..	5	7	44
1936 ..	214	106	24	344	18	55	71	415	..	5	10	46

## [APPENDIX II.]

**List of Publications issued by the Royal Asiatic Society of Bengal during 1936.****(a) Bibliotheca Indica :**

		Price		
		Rs.	As.	P.
(1) Amal-i-Salih, Vol. III, Fasc. 4 (1 unit)	..	1	0	0
(2) Tabaqat-i-Akbari, English, Vol. 2 (9 units)	..	11	4	0

**(b) Journal and Proceedings (Third Series) :**

Vol. I : Year Book (12 units)	..	..	4	8	0
Vol. I (Letters) : No. 3 ( 8 „ )	..	..	3	0	0
Vol. II (Letters) : No. 1 (10 „ )	..	..	3	12	0
Vol. II (Letters) : No. 2 ( 8 „ )	..	..	3	0	0
Vol. II (Science) : No. 1 ( 6 „ )	..	..	2	4	0

Title-page and Index to Vol. I (Free to Members).

**(c) Journal (Old Series) :**

Vol. LXXV : No. 5 (5 units)	..	..	1	14	0
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**(d) Advance Proceedings :**

Vol. III : Nos. 1-4 (Free to Members).

**(e) Miscellaneous :**

Proceedings, Twenty-third Indian Science Congress	18	0	0
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Abstract Statement  
of  
Receipts and Disbursements  
of the  
Royal Asiatic Society of Bengal  
for  
the Year 1936

## STATEMENT No. 1.

1936.

General

## Income and Expenditure Account

			Rs.	As.	P.	Rs.	As.	P.
<b>To ESTABLISHMENT :</b>								
Salaries and Allowances	..	..	31,088	8	3			
Commission	..	..	240	11	3			
						31,329	3	6
<b>GENERAL EXPENDITURE.</b>								
Stationery ..	..	..	304	11	0			
Fans and Light	..	..	477	3	3			
Telephone ..	..	..	293	1	0			
Taxes ..	..	..	2,327	10	0			
Postage ..	..	..	1,236	0	0			
Contingencies	..	..	733	0	3			
Printing Circulars, etc.	..	..	1,042	7	0			
Audit Fee ..	..	..	250	0	0			
Petty Repairs	..	..	50	14	0			
Insurance ..	..	..	500	0	0			
Menials' Clothing	..	..	162	11	0			
Furniture ..	..	..	34	8	0			
Bonus ..	..	..	150	0	0			
Honorarium	..	..	2,500	0	0			
Legal Fees..	..	..	700	0	0			
						10,762	1	6
<b>LIBRARY AND COLLECTIONS.</b>								
Books ..	..	..	2,196	15	5			
Binding ..	..	..	613	4	0			
						2,810	3	5
<b>PUBLICATIONS.</b>								
Journal and Proceedings and Memoirs		....				4,274	15	0
<b>CONTRIBUTION TO FUNDS.</b>								
Provident Fund Contribution for 1936		....				685	2	0
						49,861	9	5
<b>TRANSFER TO—</b>								
Building Repair Fund Account	..	....				2,000	0	0
<b>SUNDRY ADJUSTMENTS.</b>								
Bad Debts written-off ..	..	....				475	0	0
BALANCE AS PER BALANCE SHEET ..	..	....				2,90,939	12	8
						3,43,276	6	1

## STATEMENT No. 1.

*Fund.*

1936.

for the year to 31st December, 1936.

	Rs.	As.	P.	Rs.	As.	P.
By BALANCE FROM LAST ACCOUNT ..	....			2,75,327	13	5

## CASH RECEIPTS.

Interest on Investments ..	10,012	0	0			
Interest on Fixed Deposits ..	781	13	0			
Advertising .. ..	9,600	0	0			
Miscellaneous .. ..	233	12	6			
Government Grant .. ..	1,600	0	0			
Rent .. ..	9,300	0	0			
Contribution from Indian Science Congress .. ..	600	0	0			
				32,127	9	6

## PERSONAL ACCOUNT.

Members' Subscriptions ..	10,094	0	0			
Admission Fees .. ..	832	0	0			
Life Membership Fees ..	388	0	0			
Institutional Membership Fees ..	50	0	0			
Miscellaneous .. ..	83	10	0			
				11,447	10	0

## TRANSFER FROM FUNDS.

## Proportionate Share in General Expenditure—

Oriental Pub. Fund (1) Account	2,500	0	0			
Sanskrit MSS. Fund Account ..	2,000	0	0			
Arabic and Persian MSS. Fund Account .. ..	2,500	0	0			
				7,000	0	0

PUBLICATION FUND ACCOUNT ..	....			3,667	7	2
Appreciation, Investments revalued on 31-12-36 .. ..	....			13,705	14	0



## STATEMENT No. 2.

1936.

*Oriental Publication*

From a monthly grant made by the Government of Bengal for the publi-  
(Rs. 500), and for the publication of Sanskrit  
(*Less 20% from the*

					Rs.	As.	P.
To Printing .. .. .	..	..	..	..	13	0	0
Proportionate Share in General							
Expenditure .. .. .	..	..	..	..	2,500	0	0
Balance as per Balance Sheet .. .. .	..	..	..	..	6,270	1	11
					8,783	1	11

## STATEMENT No. 3.

1936.

*Oriental Publication*

From an annual grant made by the Government of Bengal of  
Historical  
(*Less 20% from the*

					Rs.	As.	P.
To Balance from last Account .. .. .	..	..	..	..	3,722	10	7
Printing .. .. .	..	..	..	..	1,002	12	0
Balance as per Balance Sheet .. .. .	..	..	..	..	74	9	5
					4,800	0	0

## STATEMENT No. 4.

1936.

*Sanskrit Manuscripts Fund*

From an annual grant of Rs. 3,200 made by the Government of Bengal  
by the Society ; and Rs. 3,600 from the  
(*Less 20% from the*

					Rs.	As.	P.	Rs.	As.	P.
To Pension .. .. .	..	..	..	..	130	0	0			
Cataloguing .. .. .	..	..	..	..	1,200	0	0			
Purchase of MSS. .. .. .	..	..	..	..	411	0	0			
								1,741	0	0
Proportionate Share in General										
Expenditure .. .. .	..	..	..	..	2,000	0	0			
Balance as per Balance Sheet .. .. .	..	..	..	..	18,142	1	3			
								21,883	1	3

## STATEMENT No. 2.

*Fund No. 1, in Account with R.A.S.B.*

1936.

cation of Oriental Works and Works of Instruction in Eastern Languages  
 Works hitherto unpublished (Rs. 250).  
 1st of April, 1932.)

			Rs.	As.	P.
By Balance from last Account	..	.	1,583	1	11
Annual Grant	..	..	7,200	0	0
			8,783	1	11

## STATEMENT No. 3.

*Fund No. 2, in Account with R.A.S.B.*

1936.

Rs. 3,000 for the publication of Arabic and Persian Works of  
 Interest.  
 1st of April, 1932.)

			Rs.	As.	P.
By Government Grant for 1935-36, 1936-37	..	..	4,800	0	0
			4,800	0	0

## STATEMENT No. 4.

*Account, in Account with R.A.S.B.*

1936.

for the publication of the Catalogue of Sanskrit Manuscripts acquired  
 same Government for Research Work.  
 1st of April, 1932.)

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	...				16,443	1	3
Annual Grant for Research Work, 1936-37	..	..	2,880	0	0			
Annual Grant for Cataloguing	..	..	2,560	0	0			
						5,440	0	0

21,883 1 3

## STATEMENT No. 5.

1936.

*Arabic and Persian Manuscripts*

From an annual grant of Rs. 5,000 made by the Government of India for  
by the Society; for the purchase of further Manuscripts,  
Manuscripts found in

		Rs.	As.	P.	Rs.	As.	P.
To Purchase of MSS.	..	274	9	0			
Binding	..	357	8	0			
Cataloguing	..	2,400	0	0			
Reference Works	..	235	1	0			
					3,267	2	0
Proportionate Share in General							
Expenditure	..	....			2,500	0	0
Balance as per Balance Sheet	..	....			3,301	11	0
					9,068	13	0

## STATEMENT No. 6.

1936.

*Barclay Memorial*

From a sum of Rs. 500 odd given in 1896 by the Surgeon  
encouragement of Medical

		Rs.	As.	P.	Rs.	As.	P.
To Cost of a Medal	..	....			16	5	0
Balance as per Balance Sheet—							
Rs. 700, 3½% G.P. Notes, 1854-55..		703	8	0			
Surplus at date	..	16	7	8			
					719	15	8
					736	4	8

## STATEMENT No. 7.

1936.

*Servants' Pension Fund*

Founded in 1876 as the Piddington Fund

		Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—							
Rs. 3,000, 3½% G.P. Notes, 1854-55		3,015	0	0			
Surplus at date	..	116	8	6			
					3,131	8	6
					3,131	8	6

## STATEMENT No. 5.

*Fund Account, in Account with R.A.S.B.*

1936.

the Cataloguing and Binding of Arabic and Persian Manuscripts, acquired and for the preparation of notices of Arabic and Persian various Libraries in India.

---

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	4,068 13 0
Government Grant for 1936-37	..	....	5,000 0 0

---

9,068 13 0

---

## STATEMENT No. 6.

*Fund Account, in Account with R.A.S.B.*

1936.

General, I.M.S., for the foundation of a medal for the and Biological Science.

---

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	679 11 8
Interest realized for the year	..	....	22 7 0
Appreciation, Investments revalued on 31-12-36	.. ..	....	34 2 0

---

736 4 8

---

## STATEMENT No. 7.

*Account, in Account with R.A.S.B.*

1936.

with Rs. 500 odd from the Piddington Fund.

---

		Rs. As. P.	Rs. As. P.
By Balance from last Account	..	....	2,888 13 6
Interest realized for the year	..	....	96 7 0
Appreciation, Investments revalued on 31-12-36	.. ..	....	146 4 0

---

3,131 8 6

## STATEMENT No. 8.

1936.

*Annandale Memorial Fund*

From donations by subscription,

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 4,000, 3½% G.P. Notes, 1854-55	4,020	0	0			
Surplus at date .. ..	489	13	9			
	<hr/>			4,509	13	9
				4,509	13	9

## STATEMENT No. 9.

1936.

*Permanent Library Endowment*

From gifts received,

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 14,000, 3½% G.P. Notes, 1854-55	14,070	0	0			
Surplus at date .. ..	661	7	8			
	<hr/>			14,731	7	8
				14,731	7	8

## STATEMENT No. 10.

1936.

*Sir William Jones Memorial*

From a sum gifted for the purpose in

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 3,000, 3½% G.P. Notes, 1854-55	3,015	0	0			
Surplus at date .. ..	112	10	0			
	<hr/>			3,127	10	0
				3,127	10	0

1937]

*Receipts and Disbursements.*

53

**STATEMENT No. 8.***Account, in Account with R.A.S.B.*

1936

started in 1926.

---

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			4,176	5	9
Interest realized for the year ..	....			138	8	0
Appreciation, Investments revalued on 31-12-36 .. ..	....			195	0	0
				<hr/>		
				4,509	13	9

---

**STATEMENT No. 9.***Fund Account, in Account with R.A.S.B.*

1936.

started in 1926.

---

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			13,598	13	8
Interest realized for the year ..	....			450	2	0
Appreciation, Investments revalued on 31-12-36 .. ..	....			682	8	0
				<hr/>		
				14,731	7	8

---

**STATEMENT No. 10.***Fund Account, in Account with R.A.S.B.*

1936.

1926, by Dr. U. N. Brahmachari.

---

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			2,884	15	0
Interest realized for the year ..	....			96	7	0
Appreciation, Investments revalued on 31-12-36 .. ..	....			146	4	0
				<hr/>		
				3,127	10	0

---

## STATEMENT No. 11.

1936.

*Pramathanath Bose Memorial*

From a sum gifted for

---

	Rs.	As.	P.	Rs.	As.	P.
To Balance as per Balance Sheet—						
Rs. 800, 3¼% G.P.N., 1842-43 } ..	1,809	0	0			
„ 1,000 „ „ 1865 } ..						
Surplus at date .. ..	103	11	0			
				1,912	11	0
				1,912	11	0

---

## STATEMENT No. 12.

1936.

*Joy Gobind Law Memorial*

From a donation for the purpose

---

	Rs.	As.	P.	Rs.	As.	P.
To Cost of a Medal .. ..				273	14	0
Balance as per Balance Sheet—						
Rs. 3,000, 3¼% G.P. Notes, 1854-55	3,015	0	0			
Surplus at date .. ..	87	0	0			
				3,102	0	0
				3,375	14	0

---

## STATEMENT No. 13.

1936.

*Building Fund*From a sum of Rs. 40,000 given by the Government of India  
proceeds of a portion

---

	Rs.	As.	P.
To Balance as per Balance Sheet .. ..	6,321	9	6
	6,321	9	6

---

## STATEMENT No. 11.

*Fund Account, in Account with R.A.S.B.*

1936.

the purpose in 1935.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			1,721	4	0
Interest realized for the year ..	....			103	11	0
Appreciation, Investments revalued on 31-12-36 .. ..	....			87	12	0
				1,912	11	0

## STATEMENT No. 12.

*Fund Account, in Account with R.A.S.B.*

1936.

in 1929, by Dr. Satya Churn Law.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			3,133	3	0
Interest realized for the year ..	....			96	7	0
Appreciation, Investments revalued on 31-12-36 .. ..	....			146	4	0
				3,375	14	0

## STATEMENT No. 13.

*Account, in Account with R.A.S.B.*

1936.

towards the rebuilding of the Society's premises, and from the sale of the Society's land.

---

	Rs.	As.	P.
By Balance from last Account .. ..	6,321	9	6
	6,321	9	6



## STATEMENT No. 14.

1936.

*Calcutta Science Congress Prize*

	Rs. As. P.	Rs. As. P.
To Balance as per Balance Sheet—		
Rs. 3,000, 3½% G.P.N., 1854-55 ..	3,015 0 0	
Surplus at date .. ..	768 10 7	
	<hr/>	3,783 10 7
		3,783 10 7

## STATEMENT No. 15.

1936.

*Dr Bruhl Memorial Fund*

From a sum gifted for the purpose in

	Rs. As. P.	Rs. As. P.
To Balance as per Balance Sheet—		
Rs. 1,000, 3½% G.P.N., 1854-55 ..	1,005 0 0	
Surplus at date .. ..	22 0 0	
	<hr/>	1,027 0 0
		1,027 0 0

## STATEMENT No. 16.

1936.

*Building Repair Fund*

	Rs. As. P.
To Building Repairs .. ..	1,530 2 0
Balance as per Balance Sheet .. ..	8,337 14 0
	9,868 0 0

## STATEMENT No. 14.

*Fund Account, in Account with R.A.S.B.*

1936.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			3,540	15	7
Interest realized for the year ..	....			96	7	0
Appreciation, Investments revalued on 31-12-36 .. ..	....			146	4	0
				<u>3,783</u>	<u>10</u>	<u>7</u>

## STATEMENT No. 15.

*Account, in Account with R.A.S.B.*

1936.

1929, by the Brühl Farewell Committee.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			946	3	0
Interest realized for the year ..	....			32	1	0
Appreciation, Investments revalued on 31-12-36 .. ..	....			48	12	0
				<u>1,027</u>	<u>0</u>	<u>0</u>

## STATEMENT No. 16.

*Account, in Account with R.A.S.B.*

1936.

	Rs.	As.	P.
By Balance from last Account ..	7,868	0	0
Transfer from R.A.S.B. General Fund ..	2,000	0	0
	<u>9,868</u>	<u>0</u>	<u>0</u>

## STATEMENT No. 17.

1936.

*International Catalogue of Scien-*

			Rs.	As.	P.
To Balance as per Balance Sheet	..	..	4,374	7	8
			4,374	7	8

## STATEMENT No. 18.

1936.

*Provident Fund Account,*

From contributions by the

			Rs.	As.	P.	Rs.	As.	P.
To Cost of a stamp	..	..	....			0	1	0
Balance as per Balance Sheet—								
Rs. 5,000, 3% G.P.N., 1941	..		5,250	0	0			
„ 6,000, 5-year Postal Cash Certificates	..		5,512	8	0			
Savings Bank and Advances	..		6,789	3	0			
						17,551	11	0
						17,551	12	0

## STATEMENT No. 19.

1936

*Advances Account,*

			Rs.	As.	P.
To Balance from last Account	..	..	1,135	0	0
Payments during the year	..	..	1,355	0	0
			2,490	0	0

**STATEMENT No. 17.***tific Literature, in Account with R.A.S.B.***1936.**


---

			Rs.	As.	P.
By Balance from last Account	..	..	4,374	7	8
			<u>4,374</u>	<u>7</u>	<u>8</u>

---

**STATEMENT No. 18.***in Account with R.A.S.B.***1936.**

Society and its Staff.

---

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account	..	..	....			15,663	13	6
Interest realized during the year	..		23	8	6			
Staff Contribution for the year	..		685	2	0			
Society's Contribution for the year	..		685	2	0			
						<u>1,393</u>	<u>12</u>	<u>6</u>
Interest realized from Savings Bank, etc.	..	..	....			209	12	0
Appreciation, Investments revalued on 31-12-36	..	..	....			284	6	0
						<u>17,551</u>	<u>12</u>	<u>0</u>

---

**STATEMENT No. 19.***in Account with R.A.S.B.***1936.**


---

			Rs.	As.	P.
By Refunds during the year	..	..	940	0	0
Balance as per Balance Sheet	..	..	1,550	0	0
			<u>2,490</u>	<u>0</u>	<u>0</u>

---

## STATEMENT No. 20.

1936.

*Personal*

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Account ..	....			3,126	1	9
Advances .. ..	....			2,532	2	3
Asiatic Society's Subscriptions, etc. ....	11,447	10	0			
Subscriptions to Journal and Pro- ceedings, and from Book Sales, etc.	3,667	7	2			
	<hr/>			15,115	1	2

20,773 5 2

## STATEMENT No. 21.

1936.

*Publication Fund Account,*

From sale proceeds

	Rs.	As.	P.	Rs.	As.	P.
To Books returned, etc. ..	....			179	9	0
Publications of the R.A.S.B. ..	....			3,667	7	2
Balance as per Balance Sheet ..	....			7,229	5	9

11,076 5 11

## STATEMENT No. 20.

Account.

1936.

	Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts during the year ..	....			16,698	13	5
Bad Debts written off, R.A.S.B. ..	475	0	0			
Books returned, etc. ..	179	9	0			
				654	9	0
Balance as per Balance Sheet ..	....			3,419	14	9

Outstandings.	Amount due to Society.			Amount due by Society.		
	Rs.	As.	P.	Rs.	As.	P.
Members	8,715	13	0	721	13	0
Subscribers, etc.	27	5	0	122	0	0
Bill Collector's Deposit	...	...	...	800	0	0
Miscellaneous	1,183	10	3	818	0	6
	4,876	12	3	1,456	13	6

20,773 5 2

## STATEMENT No. 21.

in Account with R.A.S.B.

1936.

of publications.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Account ..	....			7,236	7	0
Cash Sale of Publications ..	....			172	7	9
Credit Sale of Publications, etc. ..	2,179	7	2			
Subscriptions to Journal and Proceedings, etc. ..	1,488	0	0			
				3,667	7	2

11,076 5 11

## STATEMENT No. 22.

1936.

(1) *Deposit Account (Savings Bank*


---

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Account ..	....			4,051	5	6
Deposits of Interest realized from loans during the year ..	23	8	6			
Deposits of Contributions during the year ..	1,369	0	0			
Deposits of Advances returned ..	940	0	0			
				2,332	8	6
Interest realized for the year 1936 ..	....			209	12	0
				6,593	10	0

---

## STATEMENT No. 23.

1936.

(2) *Deposit Account (Fixed Deposit*


---

			Rs.	As.	P.
To Balance from last Account ..	..	..	25,000	0	0
Deposits during the year ..	..	..	100	0	0
			25,100	0	0

---

## STATEMENT NO. 24.

1936.

(3) *Deposit Account (Fixed Deposit*


---

			Rs.	As.	P.
To Balance from last Account ..	..	..	15,000	0	0
Deposits during the year ..	..	..	30,000	0	0
			45,000	0	0

---

**STATEMENT No. 22.***Deposit with Imperial Bank of India).***1936.**


---

	Rs.	As.	P.	Rs.	As.	P.
By Withdrawal for Staff Advances, etc.	....			1,355	0	0
Cost of a stamp .. ..	....			0	1	0
Balance as per Balance Sheet ..	....			5,238	9	0

---

 6,593 10 0
 

---

**STATEMENT No. 23.***with Central Bank of India).***1936.**


---

	Rs.	As.	P.
By Withdrawals during the year .. ..	25,100	0	0
	25,100	0	0

---

**STATEMENT No. 24.***with Imperial Bank of India).***1936.**


---

	Rs.	As.	P.
By Balance as per Balance Sheet .. ..	45,000	0	0
	45,000	0	0

---



## STATEMENT No. 25.

1936.

## (4) Investment

	Rs.	As.	P.
To Balance from last Account .. .. .	3,16,052	2	0
Appreciation, Investments revalued on 31-12-36..	15,623	6	0
	3,31,675	8	0

Face Value Rs.	FUNDS.	Rate <i>a</i> Rs. %	31st December, 1936, Valuation.	31st December, 1935, Valuation.	Appreciation.
			Rs.	A. P.	Rs. A. P.
	ROYAL ASIATIC SOCIETY OF BENGAL.				
	PERMANENT RESERVE.				
16,700	3½% G.P. Notes, 1842-43 ...	}			
1,53,700	3½% G.P. Notes, 1854-55 ...				
44,300	3½% G.P. Notes, 1865 ...				
6,000	3½% G.P. Notes, 1879 ...				
32,000	3½% G.P. Notes, 1900-01 ...				
2,52,700		100/8/-	2,53,903	8 0	2,41,344
500	3% G.P. Notes, 1896-97	90/-	450	0 0	431
	TEMPORARY RESERVE				
19,000	3½% G.P. Notes, 1900-01 ...	100/8/-	19,095	0 0	18,168
11,400	4½% Loan, 1955-60 ...	120/8/-	13,737	0 0	13,295
	BARCLAY MEMORIAL FUND.				
700	3½% G.P. Notes, 1854-55 ...	100/8/-	708	8 0	609
	SERVANTS' PENSION FUND.				
3,000	3½% G.P. Notes, 1854-55 ...	100/8/-	3,015	0 0	2,868
	ANNANDALE MEMORIAL FUND.				
4,000	3½% G.P. Notes, 1854-55 ...	100/8/-	4,020	0 0	3,825
	PERMANENT LIBRARY ENDOWMENT FUND.				
14,000	3½% G.P. Notes, 1854-55 ...	100/8/-	14,070	0 0	13,397
	SIR WILLIAM JONES MEMORIAL FUND.				
3,000	3½% G.P. Notes, 1854-55 ...	100/8/-	3,015	0 0	2,868
	PRAMATHANATH BOSE MEMORIAL FUND				
800	3½% G.P. Notes, 1842-43 ...	100/8/-	1,800	0 0	1,721
1,000	3½% G.P. Notes, 1865 ...	100/8/-			
	JOY GOBIND LAW MEMORIAL FUND				
3,000	3½% G.P. Notes, 1854-55 ...	100/8/-	3,015	0 0	2,868
	CALCUTTA SCIENCE CONGRESS PRIZE FUND.				
3,000	3½% G.P. Notes, 1854-55 ...	100/8/-	3,015	0 0	2,868
	DR BRÜHL MEMORIAL FUND.				
1,000	3½% G.P. Notes, 1854-55 ...	100/8/-	1,005	0 0	956
	PROVIDENT FUND.				
5,000	3% Loan, 1941 ..	105/-	5,550	0 0	5,190
6,000	Post Office 5-year Cash Certificates	91/14/-	5,512	8 0	5,287
8,28,100			3,31,675	8 0	3,16,052

**STATEMENT No. 25.***Account.**1936.*


---

			Rs.	As.	P.
By Balance as per Balance Sheet	..	..	3,31,675	8	0
			3,31,675	8	0

## STATEMENT No. 26.

1936.

*Cash*

For the year ended 31st

To	Rs.	As.	P.	Rs.	As.	P.
Balance from last Account ..				4,370	4	7
General Fund Account ..	32,127	9	6			
Oriental Publication Fund No. 1 Account ..	7,200	0	0			
Oriental Publication Fund No. 2 Account ..	4,800	0	0			
Sanskrit Manuscripts Fund Account ..	5,440	0	0			
Arabic and Persian Manuscripts Fund Account ..	5,000	0	0			
Barclay Memorial Fund Account ..	22	7	0			
Servants' Pension Fund Account ..	96	7	0			
Annandale Memorial Fund Account ..	138	8	0			
Permanent Library Endowment Fund Account ..	450	2	0			
Sir William Jones Memorial Fund Account ..	96	7	0			
Pramathanath Bose Memorial Fund Account ..	103	11	0			
Joy Gobind Law Memorial Fund Account ..	96	7	0			
Calcutta Science Congress Prize Fund Account ..	96	7	0			
Dr. Brühl Memorial Fund Account ..	32	1	0			
Provident Fund Account ..	1,393	12	6			
Advances Account ..	940	0	0			
Personal Account ..	16,698	13	5			
Publication Fund Account ..	172	7	9			
Savings Bank Deposit Account, Imperial Bank of India, Calcutta ..	1,355	0	0			
Fixed Deposit Account, Central Bank of India, Calcutta ..	25,100	0	0			
				1,01,360	4	2
				1,05,730	8	9

## STATEMENT No. 26.

Account.

1936.

December, 1936.

By	Rs.	As.	P.	Rs.	As.	P.
General Fund Account .. ..	49,861	9	5			
Oriental Publication Fund No. 1 Account ..	13	0	0			
Oriental Publication Fund No. 2 Account ..	1,002	12	0			
Sanskrit Manuscripts Fund Account ..	1,741	0	0			
Arabic and Persian Manuscripts Fund Account .. ..	3,267	2	0			
Barclay Memorial Fund Account ..	16	5	0			
Joy Gobind Law Memorial Fund Account ..	273	14	0			
Building Repair Fund Account ..	1,530	2	0			
Advances Account .. ..	1,355	0	0			
Personal Account .. ..	2,532	2	3			
Savings Bank Deposit Account, Imperial Bank of India, Calcutta .. ..	2,332	8	6			
Fixed Deposit Account, Central Bank of India, Calcutta .. ..	100	0	0			
Fixed Deposit Account, Imperial Bank of India, Calcutta .. ..	30,000	0	0			
				94,025	7	2
Balance as per Balance Sheet—						
In hand .. ..	72	13	6			
With the Imperial Bank of India, on Current Account .. ..	11,632	4	1			
				11,705	1	7

1,05,730 8 9

## STATEMENT No. 27.

1936.

*Balance*

As at 31st

## LIABILITIES.

	Rs. As. P.	Rs	As.	P.
General Fund Account .. *	2,90,939 12 8			
Oriental Publication Fund No. 1 Account	6,270 1 11			
Oriental Publication Fund No. 2 Account	74 9 5			
Sanskrit Manuscripts Fund Account ..	18,142 1 3			
Arabic and Persian Manuscripts Fund Account .. ..	3,301 11 0			
Barclay Memorial Fund Account ..	719 15 8			
Servants' Pension Fund Account ..	3,131 8 6			
Annandale Memorial Fund Account ..	4,509 13 9			
Permanent Library Endowment Fund Account .. ..	14,731 7 8			
Sir William Jones Memorial Fund Account	3,127 10 0			
Pramathanath Bose Memorial Fund Account .. ..	1,912 11 0			
Joy Gobind Law Memorial Fund Account	3,102 0 0			
Building Fund Account ..	6,321 9 6			
Calcutta Science Congress Prize Fund Account .. ..	3,783 10 7			
Dr. Brühl Memorial Fund Account ..	1,027 0 0			
Building Repair Fund Account ..	8,337 14 0			
International Catalogue of Scientific Literature, London ..	4,374 7 8			
Provident Fund Account ..	17,551 11 0			
Publication Fund Account ..	7,229 5 9			
		3,98,589	1	4
		3,98,589	1	4

We have examined the above Balance Sheet and the appended detailed accounts with the Books and Vouchers presented to us and certify that they are in accordance therewith, and, in our opinion, set forth correctly the position of the Society as at 31st December, 1936

PRICE, WATERHOUSE, PEAT &amp; Co.,

Calcutta,  
12th February, 1937Auditors,  
Chartered Accountants,  
Registered Accountants.

## STATEMENT No. 27.

Sheet.

1936.

December, 1936.

## ASSETS.

			Rs.	As.	P.	Rs.	As.	P.
Advances Account	..	..	1,550	0	0			
Personal Account	..	..	3,419	14	9			
			<hr/>			4,969	14	9
Deposits:—								
Savings Bank Deposit Account, Imperial Bank of India	..	..	5,238	9	0			
Fixed Deposit Account, Imperial Bank of India	..	..	45,000	0	0			
			<hr/>			50,238	9	0
Investment Account	..	..	....			3,31,675	8	0
Cash Account:—								
In hand	..	..	72	13	6			
With the Imperial Bank of India, on Current Account	..	..	11,632	4	1			
			<hr/>			11,705	1	7

3,98,589 1 4

S. L. HORA,  
Honorary Treasurer.



## [APPENDIX IV.]

### **Abstract Proceedings Council, 1936.**

(Rule 48 f.)

#### **ACCOMMODATION -**

Request for the use of the Society's Hall by the Himalayan Club.  
Approve.

No. 3. 27-1-36.

Application from Mohammed Yakoob that the Society may kindly let out to him a piece of vacant land on the south eastern side of the Society's premises for opening an aerated water shop. Reject.

No. 14. 25-5-36.

Request for the use of the Society's Committee room for a Committee Meeting of the National Institute of Sciences of India on Saturday, the 27th June, at 5 p.m. Grant.

No. 10. 22-6-36.

Request for the use of the Society's Lecture Hall by the Mining and Geological Institute of India. Record; General Secretary's action approved.

No. 2. 27-7-36.

Request for the use of the Society's Committee room and Lecture Hall on August 29th and 30th by the National Institute of Sciences of India. Grant.

No. 5. 25-8-36.

Letter from the Honorary Secretary, Himalayan Club, enquiring whether the Society would let out a corner room for the use of their club. Unable to rent out the corner room in view of the fact that it may be needed for the Society's own use.

No. 3. 30-9-36.

Request for the use of the Society's Hall by the Mining and Geological Institute of India. Grant.

No. 1. 17-12-36.

#### **AGENCIES -**

Appointment of an Agent to the Society in Japan. That the General Secretary be empowered to make the necessary arrangements to appoint a suitable agent.

No. 16. 27-1-36.

#### **ANNUAL MEETING—**

Annual Meeting. Record.

No. 12. 27-1-36.

Annual Report. Accept.

No. 13. 27-1-36.



## ARTISTIC POSSESSIONS —

Letter from Mr. D. C. Ghose offering to present to the Society a portrait of the late Sir C. C. Ghose. Accept with thanks to donor.

No. 4.

27-1-36.

Letter from the Master, H. M.'s Mint, regarding the Bust of W. N. Forbes. Get the bust repaired under the supervision of the Mint Master.

No. 16.

30-9-36.

## BIBLIOTHECA INDICA—

Proposal by Dr. S. K. Chatterji to publish in the Bibliotheca Indica the Varna-ratna-kara to be edited jointly by Dr. Chatterji and Pandit Babua Misra. Dr. Chatterji to contribute an English introduction. An Index Verborum to be added. No remuneration to Dr. Chatterji; usual editor's remuneration for the Maithili text to Pandit Misra. Accept for publication.

No. 11.

27-4-36.

Request from the Theosophical University Press, California, to send frequently works relating to Oriental studies published by the Society for reviewing in their 'Forum'. Supply them with price lists of the Society's publications.

No. 11.

22-6-36.

## BUILDING—

Recommendation Finance Committee No. 4 of 24-9-36. Recommendation of the General Secretary and the Honorary Treasurer with regard to the advice from Mr. M. N. Mukherjee, B.E., Consulting Engineer to the Calcutta University, regarding Building Repairs. Recommended to the Council to accept the suggestions of Mr. M. N. Mukherjee as contained in his letters of 2-9-36 and 21-9-36. That the work of repairs should be taken up at once which should be entrusted to Messrs. Martin & Co., who should be asked to do the half-terracing of the roof except the north-west and south portions as suggested by Mr. Mukherjee and Messrs. Lyall Marshall & Co. to do the work of covering the T. iron roofs with 'C' grade Malthoid with gravel finish (5 layers) at Rs. 21 per 100 sq. ft. under the supervision of Messrs. Martin & Co. As the work is very urgent the General Secretary be requested to place the order with Messrs. Martin & Co. immediately. Accepted by Council.

No. 8.

30-9-36.

Matters relating to the repairs to the Society's building. Accept recommendations of the Finance Committee; letter of thanks to be sent on behalf of the Society to Mr. M. N. Mukherjee for his valuable advice and help.

No. 9.

30-9-36.

Report completion of the repairs to the roof of the Society's building, and the re-wiring. Record.

No. 3.

24-11-36.

## COMMITTEES—

The Standing Committees of the Society for 1936-37 to be constituted as follows:—

*Finance :*

President	}	<i>Ex-Officio.</i>
Treasurer		
General Secretary		
Dr. J. N. Mukherjee.		
Dr. Baini Prashad		

*Library :*

President	}	<i>Ex-Officio.</i>
Treasurer		
General Secretary		
Philological Secretary		
Jt. Philological Secretary		
Biological Secretary		
Physical Science Secretary		
Anthropological Secretary		
Medical Secretary		
Library Secretary		

*Publication :*

President	}	<i>Ex-Officio.</i>
Treasurer		
General Secretary		
Philological Secretary		
Jt. Philological Secretary		
Biological Secretary		
Physical Science Secretary		
Anthropological Secretary		
Medical Secretary		
Library Secretary		

No. 3.

24-2-36.

## CONDOLENCES—

Report death of Sir R. N. Mookerjee. Resolved: That the Council of the Royal Asiatic Society of Bengal place on record their deep sense of sorrow at the death of Sir Rajendranath Mookerjee, K.C.I.E., K.C.V.O., who had been a President of the Society and a member of Council for several years; also their appreciation of the great services which the late Sir Rajendranath had rendered to the Society. The resolution, moved by the Chairman, was adopted all members standing. Also resolved that the condolence of the Council be communicated to Lady Mookerjee, and the General Secretary should arrange for an obituary notice to be read at the Monthly Meeting of the Society.

No. 1.

25-5-36.

## CONGRATULATIONS AND THANKS.

Letter from Mr. D. C. Ghose offering to present to the Society a portrait of the late Sir C. C. Ghose. Accept with thanks to donor.

No. 4.

27-1-36.

Letter of thanks to H.E. the Viceroy for the acceptance by him of office of a Patron of the Society. Record and announce in the Monthly Meeting.

No. 1.

27-7-36.

Congratulation to Dr. H. E. Stapleton on his being admitted to the degree of Doctor of Literature by the University of Oxford. Record.  
No. 1. 30-9-36.

#### COUNCIL—

Finance Committee No. 6 of 23-1-36. Absence of Honorary Treasurer from Calcutta. Recommended that during the Society's financial year 1936-37, the General Secretary for the time being be authorised automatically to officiate as Honorary Treasurer to the Society during any absence of the Honorary Treasurer for the time being from Calcutta from the initial date of any such absence until notification of his return to Calcutta and resumption of Office. Accepted by Council.

No. 8.

27-1-36

Officiating arrangements, Honorary Treasurer. Modify the general resolution regarding officiating arrangements to the usual specific one as follows—That the General Secretary (Mr. Johan van Manen) be authorised to officiate as Honorary Treasurer to the Society during the absence of the Honorary Treasurer, Dr. S. L. Hora, from Friday, the 14th January, 1936, until notification of the latter's return to Calcutta and resumption of office, and put up the general one in the first meeting of the new Council.

No. 9.

27-1-36.

Acceptance of seat on the Council by Council members. Record.  
No. 1. 24-2-36.

Absence of Honorary Treasurer from Calcutta (postponed from the Council Meeting of 27-1-36). Resolved that during the Society's financial year 1936-37, the General Secretary, for the time being, be authorised automatically to officiate as Honorary Treasurer, during the absence from Calcutta of the Honorary Treasurer, for the time being, from the initial date of any such absence until notification of his return to Calcutta and resumption of office.

No. 6.

24-2-36.

Report General Secretary's interview with the President, H. E. the Governor of Bengal. Record. Fix Tuesday, 31st March as date for next Council Meeting and accept with thanks suggestion to meet at Government House.

No. 11.

24-2-36.

Letter from the Asst. Secretary to H. E. the Governor of Bengal regarding the Council Meeting of the Society in Government House on March 31st. Record.

No. 2.

31-3-36.

Leave General Secretary. Resolved that Mr. van Manen be allowed leave of absence for six months from such date as he may find convenient and that an honorarium of Rs. 7,000 be paid to him which will include his ordinary monthly compensation allowance for the period. That Sir Upendranath Brahmachari be requested to act as General Secretary to the extent of dealing with all major questions and signing correspondence, taking full responsibility; and that Dr. Hidayat Hossain be requested generally to assist Sir Upendranath Brahmachari, taking charge of the office and preparing matters for Sir Upendranath.

No. 10.

27-4-36.

Report absence of General Secretary from the 16th May and taking over charge by Sir U. N. Brahmachari. Record.

No. 3.

25-5-36.

Notice of absence of the Library Secretary. Mr. Percy Brown to act.

No. 4.

25-8-36

The question of having Council Meeting in October (Pooja holidays are from 19th to 30th October). No Committee and Council meetings in October.

No. 12.

30-9-36.

Report return from leave of the General Secretary. Record.

No. 1.

24-11-36.

Informal consideration composition of Council, 1937-38.

After discussion, the following list of candidates for nomination to next year's Council was placed before the meeting for consideration.

President	..	..	H. E. Sir John Anderson.
Vice-President	..	..	Sir U. N. Brahmachari.
"	..	..	Dr. A. M. Heron.
"	..	..	Mr. Percy Brown.
"	..	..	Lt.-Col. N. Barwell.
General Secretary	..	..	Mr. Johan van Manen.
Treasurer	..	..	Dr. S. L. Hora.
Phil. Secretary	..	..	Dr. S. K. Chatterji.
Jt. Phil. Secretary	..	..	Dr. M. Hidayat Hossain.
Nat. Hist. Secretary (Biology)	..	..	Dr. Baini Prashad.
" " " (Phys. Science)	..	..	Dr. J. N. Mukherjee.
Anthropological Secretary	..	..	R. B. R. Chanda
Medical Secretary	..	..	Lt.-Col. R. N. Chopra.
Library Secretary	..	..	Mr. M. Mahfuz-ul Haq.
Member of Council	..	..	Mr. C. C. Calder.
"	"	..	Mr. N. G. Majumdar.
"	"	..	Mr. K. C. Mahindra.
"	"	..	Dr. B. S. Guha.
"	"	..	Mr. W. D. West.
"	"	..	Sir John Lort-Williams.

Unanimously resolved that the General Secretary do print and circulate to the members of Council the list of the Council as at present constituted, together with the new list placed before the meeting, and provided with a new column for additional names; and that these lists be returned to the General Secretary within a week of date of issue; and that a list be compiled of the candidates finally proposed and be placed before the next Council Meeting to be voted upon.

No. 13.

24-11-36.

Council nomination, 1936-37. The General Secretary reported that 17 Council members had returned the list of candidates circulated, duly signed and unanimously approved with one alternate suggestion. Resolved that the list of names placed before the Council in the November meeting be declared that of the Council candidates for election to next year's Council, and that it be ordered to be issued to Resident members, as prescribed in Rule 44.

No. 11.

17-12-36.

## EXCHANGE OF PUBLICATIONS—

Application for an exchange of publication from the Toyo Bunko, (The Oriental Library), Tokyo, Japan. Exchange, 'Journal (Letters and Science).'

No. 12.

31-3-36.

Letter from Dr. Bains Prashad requesting sympathetic consideration of a request from the Field Museum of Natural History. Grant on exchange basis. The Field Museum of Natural History be requested to send us the back numbers of their publications which are lacking in the set, viz:

- (a) Botanical Series from 1913-1936,
- (b) Zoological Series from 1913-1936,
- (c) Geological Series from 1913-1936,
- (d) Ornithological Series from 1906-1936,

in exchange for the back numbers of the Society's Proceedings and Journal as far as available. The Field Museum be further requested to continue sending to the Society the above series without any break, in addition to the Anthropological and Report Series which are being received from them in exchange.

No. 5.

27-7-36.

Request for an exchange of the Society's publications with the Trivandrum Sanskrit Series from the Curator, Publication of Oriental Manuscripts, Trivandrum. Exchange the Sanskrit publications of the Society with the Trivandrum Sanskrit Series.

No. 2.

30-9-36.

## FANS—

Recommendation Finance Committee No. 6 of 19-11-36. Fans. Renewals of fans to be taken in hand, but all fans to be individually tested in the first instance and the General Secretary to obtain quotations and place them before the next Finance Committee. Accepted by Council.

No. 8.

24-11-36.

Recommendation Finance Committee No. 4 of 16-12-36. Replacement of Society's fans. Defer. Accepted by Council.

No. 6.

17-12-36.

## FELLOWS—

Recommendations of the meeting of Resident Fellows. Accepted; put up for election in the Annual Meeting, Dr. S. K. Chatterji, Dr. A. M. Heron, Mr. N. G. Majumdar and Nawab Habib-ur-Rahman Shirwani.

No. 7.

27-1-36.

Recommendation of the meeting of Resident Fellows on 16th June, 1936. Accept the recommendation that the title of Fellows should henceforth be 'F.R.A.S.B.' instead of F.A.S.B. as a consequential change of the Society's name from 'Asiatic Society of Bengal' to 'Royal Asiatic Society of Bengal'. It was resolved to communicate this change of title of Fellows to the next Ordinary Monthly Meeting.

No. 12.

22-6-36.

**FINANCE—**

Recommendations of the Finance Committee of 23-1-36. Accept with the following modifications. Council subscriptions to be invited to meet expenditure of Council tea. The cost of the General Meeting tea to be debited to the Society.

No. 8.

27-1-36.

Recommendation Finance Committee No. 3 of 23-1-36. Society's Monthly General Meeting Tea expenditure. Recommend that tea be provided to General Meetings and Council Meetings and the cost debited to the Society. Council order: Council subscriptions to be invited to meet expenditure for Council teas. The cost for the General Meeting tea to be debited to Society.

No. 8.

27-1-36.

Finance Committee No. 5 of 23-1-36. Remuneration to staff working on holidays. Recommendation : Hold over pending collection of information concerning practices in various offices. Accepted by Council.

No. 8.

27-1-36.

Finance Committee No. 6 of 23-1-36. Absence of Honorary Treasurer from Calcutta. Recommended that during the Society's financial year, 1936-37, the General Secretary for the time being be authorised automatically to officiate as Honorary Treasurer to the Society during any absence of the Honorary Treasurer for the time being from Calcutta from the initial date of any such absence until notification of his return to Calcutta and resumption of Office. Accepted by Council.

No. 8.

27-1-36.

Recommendation Finance Committee No. 7 of 23-1-36. Application from S. K. Roy for a loan of Rs. 250 from the Provident Fund. Grant, to be returned in monthly instalments of Rs. 10 at 3% per annum. Accepted by Council.

No. 8.

27-1-36.

Recommendation Finance Committee No. 8 of 23-1-36. Application from R. K. Iyer for a loan of Rs. 250 from the Provident Fund. Grant, to be returned in monthly instalments of Rs. 20 at 3% per annum. Accepted by Council.

No. 8.

27-1-36.

Recommendation Finance Committee No. 9 of 23-1-36. Permanent Reserve Fund. Transfer Rs. 2,400 to Permanent Reserve Fund from closing balance. Accepted by Council.

No. 8.

27-1-36.

Recommendation Finance Committee No. 4(b) of 21-2-36. Application for a loan of Rs. 80 from the Provident Fund by R. B. Mukherjee. Grant as far as rules allow, subject to the Honorary Treasurer's approval. Interest at 3% per annum. Accepted by Council.

No. 5.

24-2-36.

Recommendations of the Finance Committee of 27-3-36. Accept. The General Secretary reported that Messrs. Lakhiraj Showakram having since cleared all arrears no further action need be taken.

No. 8.

31-3-36.

Library Committee No. 2(a) of 31-3-36. Recommendation by the Philological Secretary for the purchase of a set of the Calcutta Sanskrit Series at a cost of approximately Rs. 100. Accepted by Council.  
No. 9. 31-3-36.

Recommendation Finance Committee No. 3 of 27-3-36. The question of the renewal of the Society's Fire Insurance Policy No. 15467332, with the Commercial Union Assurance Co., Ltd., which expires on 19th April, 1936. Renew. Accepted by Council.  
No. 8. 31-3-36.

Recommendation Finance Committee No. 4 of 27-3-36. The question of the realization of arrears of rent from Messrs. Lakhiraj Shewakram & Co., Lessee, 1-1, Park Street, Calcutta. The General Secretary reported that Messrs. Lakhiraj Shewakram having since cleared all arrears no further action need be taken.  
No. 8. 31-3-36.

Recommendation Finance Committee No. 2(b) of 24-4-36. Consideration of re-investing the liquid cash of the Society as two fixed deposits with the Central Bank of India Ltd., Calcutta, (maturing by the end of this month). Transfer Rs. 5,000 to the current account with the Imperial Bank of India; re-invest Rs. 10,000 for six months on fixed deposit with the Central Bank. Accepted by Council.  
No. 6. 27-4-36.

Recommendation Finance Committee No. 3 of 24-4-36. Application from K. Krishnamurti to be allowed to join the Society's Provident Fund. Decline. Accepted by Council.  
No. 6. 27-4-36.

Recommendation Finance Committee No. 4 of 24-4-36. Application from the Society's staff for the Science Congress Bonus. That in view of the Committee's recommendation no claim for bonus can be entertained but that as an act of grace without creating a precedent a sum of Rs. 150 be paid to such members of the staff and in such proportion as may be recommended by the Honorary Treasurer and the General Secretary. Accepted by Council.  
No. 6. 27-4-36.

Recommendation Library Committee No. 5(a) of 27-4-36. Subscription Indian Zoological Memoirs, Lucknow. Purchase issues not yet in the Society's Library and place standing order for future issues. Accepted by Council.  
No. 7. 27-4-36.

Leave General Secretary. Resolved that Mr. van Manen be allowed leave of absence for six months from such date as he may find convenient and that an honorarium of Rs. 7,000 be paid to him which will include his ordinary monthly compensation allowance for the period. That Sir Upendranath Brahmachari be requested to act as General Secretary to the extent of dealing with all major questions and signing correspondence, taking full responsibility; and that Dr. Hidayat Hosain be requested generally to assist Sir Upendranath Brahmachari, taking charge of the office and preparing matters for Sir Upendranath.  
No. 10. 27-4-36.

Remittance from Raja K. Deb, Rai Mahasai, who was removed under Rule 38 in 1934, for regularising his membership. The matter to be settled in accordance with the rules in consultation with the Honorary Treasurer.  
No. 5. 30-9-36.

Recommendation Finance Committee No. 4 of 24-9-36. Recommendation of the General Secretary and the Honorary Treasurer with regard to the advice from Mr. M. N. Mukherjee, B.E., Consulting Engineer to the Calcutta University, regarding Building Repairs. Recommended to the Council to accept the suggestions of Mr. M. N. Mukherjee as contained in his letters of 2-9-36 and 21-9-36. That the work of repairs should be taken up at once which should be entrusted to Messrs. Martin & Co., who should be asked to do the half-terracing of the roof except the north-west and south portions as suggested by Mr. Mukherjee and Messrs. Lyall Marshall & Co. to do the work of covering the T. iron roofs with 'C' grade Malthoid with gravel finish (5 layers) at Rs. 21 per 100 sq. ft. under the supervision of Messrs. Martin & Co. As the work is very urgent the General Secretary be requested to place the order with Messrs. Martin & Co. immediately. Accepted by Council.

No. 8.

30-9-36.

Matters relating to the repairs to the Society's building. Accept recommendations of the Finance Committee; letter of thanks to be sent on behalf of the Society to Mr. M. N. Mukherjee for his valuable advice and help.

No. 9.

30-9-36.

Recommendation Finance Committee No. 6 of 19-11-36. Fans. Renewals of fans to be taken in hand, but all fans to be individually tested in the first instance and the General Secretary to obtain quotations and place them before the next Finance Committee. Accepted by Council.

No. 8.

24-11-36.

Recommendations of the Special Finance Committee of 15-12-36. (Budget estimates for 1937). Accept.

No. 5.

17-12-36.

Recommendation Finance Committee No. 3(d) of 16-12-36. Increment of Salaries to Staff. The Honorary Treasurer and the General Secretary to put up the proposals; menials to get their usual increment. Accepted by Council.

No. 6.

17-12-36.

Recommendation Finance Committee No. 3(e) of 16-12-36. Budget estimates for 1937. Accept. Accepted by Council.

No. 6.

17-12-36.

Recommendation Finance Committee No. 4 of 16-12-36. Replacement of Society's fans. Defer. Accepted by Council.

No. 6.

17-12-36.

Recommendation Finance Committee No. 5 of 16-12-36. Authority to make payments of bills before the end of the year. Recommend. Accepted by Council.

No. 6.

17-12-36.

Removal of names under Rule 38. 1. Shiv Bandhu Pande Rs.72; 2. G. T. Sitling Rs.66; 3. J. P. Shulka Rs.72. Apply Rules.

No. 10.

17-12-36.

Payment of bills. That the Treasurer be authorised to make payments of bills before the end of the year before they are formally passed by the Finance Committee.

No. 12.

17-12-36.



**HONORARY FELLOWS—**

Report death of Sir R. N. Mookerjee. Resolved: That the Council of the Royal Asiatic Society of Bengal place on record their deep sense of sorrow at the death of Sir Rajendranath Mookerjee, K.C.I.E., K.C.V.O., who had been a President of the Society and a member of Council for several years; also their appreciation of the great services which the late Sir Rajendranath had rendered to the Society. The resolution, moved by the Chairman, was adopted all members standing. Also resolved that the condolence of the Council be communicated to Lady Mookerjee, and the General Secretary should arrange for an obituary notice to be read at the Monthly Meeting of the Society.

No. 1.

25-5-36.

**INDIAN SCIENCE CONGRESS ASSOCIATION—**

Recommendation Finance Committee No. 4 of 23-1-36. Application from the Society's staff for the Indian Science Congress Bonus. Decline. Accepted by Council.

No. 8.

27-1-36.

Recommendation Finance Committee No. 4 of 24-4-36. Application from the Society's staff for the Science Congress Bonus. That in view of the Committee's recommendation no claim for bonus can be entertained but that as an act of grace without creating a precedent a sum of Rs. 150 be paid to such members of the staff and in such proportion as may be recommended by the Honorary Treasurer and the General Secretary. Accepted by Council.

No. 6.

27-4-36.

**INSTITUTIONAL MEMBERS -**

Application for Institutional Membership from the Forest Research Institute, Dehra Dun. Accept the application.

No. 4.

31-3-36.

**INSURANCE—**

Recommendation Finance Committee No. 3 of 27-3-36. The question of the renewal of the Society's Fire Insurance Policy No. 15467332, with the Commercial Union Assurance Co., Ltd., which expires on 19th April, 1936. Renew. Accepted by Council.

No. 8.

31-3-36.

**KAMALA LECTURESHIP—**

Representation on the Selection Committee, Kamala Lectureship, Calcutta University. Sir Upendra Nath Brahmachari to be the Society's representative.

No. 3.

31-3-36.

**LEASE—**

Recommendations of the Finance Committee of 27-3-36. Accept. The General Secretary reported that Messrs. Lakhiraj Showakram have since cleared all arrears that no further action need be taken.

No. 8.

31-3-36.

Recommendation Finance Committee No. 4 of 27-3-36. The question of the realization of arrears of rent from Messrs. Lakhiraj Showakram & Co., Lessee, 1-1, Park Street, Calcutta. The General Secretary reported that Messrs. Lakhiraj Showakram having since cleared all arrears no further action need be taken.

No. 8.

31-3-36.

## LECTURES—

General Lectures. Dr. J. N. Mukherjee offered to deliver a General Lecture to the Society towards the end of July on 'Soil'. Accept the offer of Dr. Mukherjee with thanks, Col. Knowles to be requested to deliver a General Lecture at a time and on a date convenient to him.

No. 13.

22-6-36.

Letter from Dr. J. Ph. Vogel suggesting that the Council of the Society might invite Dr. Hermann Goetz to give one or two lectures to the Society. Dr. H. Goetz to be invited to give a lecture to the Society during the winter on any of the following subjects:—

1. Life and Art in the Mughal period (with slides).
2. Eastern Elements in European paintings of the 15th-17th Centuries (with slides).
3. Indo-European Cultural Relations in the Light of European Colonial History.

No. 4.

30-9-36.

## LIBRARY—

Library Committee No. 2(a) of 31-3-36. Recommendation by the Philological Secretary for the purchase of a set of the Calcutta Sanskrit Series at a cost of approximately Rs. 100. Accepted by Council.

No. 9.

31-3-36.

Request from the Joint Philological Secretary that the Society may purchase a number of biographical works for the Arabic and Persian Manuscript department, at a total cost of Rs. 65-7-0. Purchase.

No. 13.

31-3-36.

Recommendation Library Committee No. 5(a) of 27-4-36. Subscription Indian Zoological Memoirs, Lucknow. Purchase issues not yet in the Society's Library and place standing order for future issues. Accepted by Council.

No. 7.

27-4-36.

Recommendation Library Committee No. 3 of 24-11-36. That Sir U. N. Brahmachari be co-opted a member of the Committee for the remainder of the year. Accepted by Council.

No. 9.

24-11-36.

## LOAN OF MSS.—

Report on manuscripts lent out during the month. Record.

No. 5.

27-1-36.

Applications for loan of manuscripts:—

- (a) Bimalananda Tarkatirtha (Member, A.S.B.) for 'Shivakosha' for three months. Lend the manuscripts against indemnity bond for the value of Rs. 250.
- (b) The Offg. Secretary, Councils of Post-Graduate Teaching in Arts and Science, Calcutta University, for the manuscripts. Lend 'Svaramanjari' and 'Bhattikavya' against indemnity bonds for their value.
- (c) The Registrar, Calcutta University, for Bhartrahari's Vakapadiya. Lend the manuscript against indemnity bond for the value of Rs. 100.

- (d) Librarian, Imperial Library, for Durratut Taj. Lend the manuscript against indemnity bond for the value of Rs.150.  
No. 6. 27-1-36.

Applications for loan of manuscripts from:—

- (a) Bombay Branch, Royal Asiatic Society, Persian 'Lama 'atu't-tahirin'. Lend the manuscript against Indemnity Bond to the value of Rs. 700.  
(b) R. D. Kabyatirtha for 'Bodhasiddhi' and 'Bodhasiddhiprakasa'. Lend the two manuscripts against the general Indemnity Bond for Rs. 1,000 already executed by him.  
(c) The Registrar, University of Madras, Persian Tabaqat-i-Akbar-Shahi (Nos. 115 and 116). Write to the applicant that the manuscript has already been published in the Bibliotheca Indica, if still needed, lend the manuscript against Indemnity Bonds to the value of Rs. 500 and Rs. 600 respectively.  
(d) The question of the recovery of the manuscript 'Rasala dar 'Amal-i-rub-i-mujayyah' lent to Dr. Zia-ud-Din Ahmad in May 1929. The General Secretary to look into the matter and report to the next Council meeting. Sir B. L. Mitter to look into the wording of the bond form and to advise the Council.

No. 6. 31-3-36.

Applications for loan of manuscripts from:—

- (a) India Office, London (two Manuscripts). Grant loan.  
(b) Curator, Bhandarkar Oriental Research Institute, Poona. (Three manuscripts). May be granted after return of previous MSS.  
(c) Secretary, Post-Graduate Department in Arts, Calcutta University (one manuscript). Intimate that local loans of MSS. are no longer granted but that MS. may be consulted in the Society's rooms.  
(d) Superintendent, Oriental Publication Bureau, Hyderabad, Deccan (one manuscript). Grant loan, against usual Indemnity bond for a period of three months.

No. 5. 27-4-36.

Applications for extension of the loan of manuscripts for: --

- (a) Six months from B. Bhattacharya, Oriental Institute, Baroda (MS. Ganda Vyuha). Recall, but intimate that the MS. may be applied for anew.  
(b) One year from the Curator, Bhandarkar Oriental Research Institute, Poona, (MS. Mahabharata-Tatparyatika-Jnandipika). Recall, but intimate that the MS. may be applied for anew.

No. 4. 27-4-36.

Report on manuscripts lent out during the month. Record.

The General Secretary reported that five members had returned the manuscripts in response to the circular letter issued to all those who had taken manuscripts on loan from the Society, and Dr. Zia-ud-Din Ahmad had not replied.

Resolved: Request the kind offices of Sir B. L. Mitter in the matter of obtaining the manuscript or its price from Dr. Zia-ud-Din Ahmad as soon as he returns from leave.

No. 6. 25-5-36.

## Applications for loan of manuscripts.

(a) India Office Library for 'Yusuf u Zalixa'. Grant loan.

(b) Vanamali Vedantatirtha, Calcutta, 'Ramayantika Manohara'. Unable to comply in view of the last month's Council resolution.

No. 7.

25-5-36.

Request from Ganapati Sircar, Calcutta, to be allowed to extend the period of the loan for a month and a half of 'Chandoga Parisista-tika'. Grant.

No. 8.

25-5-36.

## Application for loan of manuscript.

(a) From Dr. R. C. Majumdar for Canda-kausika (three MSS.). Lend against fresh Indemnity bonds to the values of Rs. 100, Rs. 25 and Rs. 100 under usual conditions.

(b) From the Bhandarkar Oriental Research Institute, Poona, for Sangitasudhakar by Bhimabhupala. Lend against Indemnity bond to the value of Rs. 300 under usual conditions.

No. 4.

22-6-36.

## Application for loan of manuscripts from:

(a) Prof. B. A. Chaugule, Lingaraj College, Belgaum, for Audarya-cintamani manuscript. (Non-member). Reject in view of the fact that the applicant is not a member.

(b) The Bhandarkar Oriental Research Institute, Poona, for Kathasaritasagara Manuscript. The Institute be requested to return one or two manuscripts which are already with them; on receipt of which further MSS. be sent to them on loan.

(c) The India Office Library, London, for Devi Puranam Manuscript. Lend after it has been valued by the Philological Secretary.

No. 6.

27-7-36.

## Application for the extension of the periods of loan from: -

(a) The Secretary, Council of Post-Graduate Teaching in Arts, Calcutta University, up to January, 1937, of the loan of Bhattachakya and Sarvamanjari Manuscripts. Grant.

(b) Rao Bahadur K. V. Rangaswami Ayyangar, Benares, for three months more of the loan of four parts of Krtiyakalpataru Manuscripts. Grant.

No. 7.

27-7-36.

Application from Mr. K. C. Chatterjee to be allowed to copy Manuscripts belonging to the Society. The Philological Secretary kindly to interview the applicant in connection with the arrears outstanding against him; if satisfactorily settled his request be brought up again for consideration of Council.

No. 8.

27-7-36.

## Applications for loan of manuscripts from:—

(a) The Principal, Government Sanskrit College, Benares, for Jataka Sudhakar. Lend the manuscript under usual conditions.

(b) Dr. S. N. Das-Gupta, Calcutta, for Prakirna Prakasam. The General Secretary to use his discretion in the matter.

- (c) Bhandarkar Oriental Research Institute, Poona, for further two manuscripts and for relaxing the restriction of the number of MSS. to be lent out to them. Draw their attention to the three MSS. which are already overdue; on receipt the MSS. may be lent to them under the usual conditions.

No. 6.

30-9-36.

Application from the Bhandarkar Oriental Research Institute, Poona, for the extension of the period of the loan of three manuscripts for a further period of six months. Grant.

No. 5.

24-11-36.

Application from the Librarian, Imperial Library, for the loan of 'Tarikh-e-Herat' manuscript belonging to the Society. Grant.

No. 6.

24-11-36.

Application for the loan of 'Mathnawiyyat-i-Nami' MS. from the Librarian, Punjab University Library, Lahore. Grant against Indemnity bond to the value of Rs. 500.

No. 2.

17-12-36.

#### MANUSCRIPTS—

Report purchase of manuscripts. Approve.

No. 2.

27-1-36.

Report purchase of Tantra Manuscripts. Approve.

No. 2.

24-2-36.

The question of recovery of the manuscript 'Rasala dar 'Amal-i-rub-i-mujayyab' loaned to Dr. Zia-ud-Din Ahmad. One more letter to be written. If no reply be received within two weeks to be followed by a lawyer's letter.

No. 2.

27-4-36.

Statement of loans of manuscripts outstanding beyond three or more years. Recall all MSS. retained beyond the periods specified in the bonds, taking into account extensions granted, and drawing attention to the regulations regarding the loans of MSS.

Further resolved that a MSS. lending regulations revision committee be formed consisting of Col. Barwell, the two Philological Secretaries and the General Secretary, to draft a set of revised rules to be placed before the next meeting of the Council.

Also resolved that in future residents of Calcutta shall not except for special reasons be permitted to borrow MSS. from the Society's library but shall be permitted to consult them in the Society's rooms.

No. 3.

27-4-36.

Report about the Ica Famulus Camera. Record with thanks.

No. 2.

25-7-36.

The question of making arrangements for photographing manuscripts by the Society's Ica Famulus Camera. Record.

No. 4.

24-11-36.

Permanent loan to the Society of Sanskrit MSS. The General Secretary reported receipt of a letter, dated the 15th November, 1936, from the Department of Education, Health and Lands, conveying the consent of the Government of India to the permanent loan to the Society of the manuscripts in the Archaeological Section, Indian Museum, Calcutta. Record.

No. 14.

24-11-36.

**MEETINGS—**

Recommendation Finance Committee No. 3 of 23-1-36. Society's Monthly General Meeting Tea expenditure. Recommend that tea be provided to General Meetings and Council Meetings and the cost debited to the Society. Council order: Council subscriptions to be invited to meet expenditure for Council tea. The cost for the General Meeting tea to be debited to the Society.

No. 8. 27-1-36.

The question of having a Monthly Meeting in September. (The Monthly Meeting which was arranged for August had been cancelled owing to the death of Col. Knowles). Meeting to be held; programme of the August meeting to be followed.

No. 9. 25-8-36.

Meeting programme, November Monthly Meeting. The General Secretary to arrange the meeting programme by the inclusion of any suitable items.

No. 15. 30-9-36.

**MEMBERSHIP—**

List of members in arrears of subscriptions. (23 names altogether). Apply rules.

No. 15. 25-5-36.

Report death of Col. Knowles. Record. Announce in the next Monthly Meeting. An obituary notice to be printed.

No. 3. 25-8-36.

Remittance from Raja K. Deb, Rai Mahasai, who was removed under Rule 38, in 1934, for regularising his membership. The matter to be settled in accordance with the rules in consultation with the Honorary Treasurer.

No. 5. 30-9-36.

Renoval of members (absent in Europe for over three years) under Rule 40. (7 names). Apply rules.

No. 12. 24-11-36.

Removal of names under Rule 38. (1) Shiv Bandhu Pande Rs.72; (2) G. T. Sitling Rs.66; (3) J. P. Shukla Rs.72. Apply Rules.

No. 10. 17-12-36.

**MEMORIALS—**

Appointment of Advisory Board for the Annandale Memorial Medal. The board to consist of Dr. B. S. Guha and the Ex-officio members (Anthropological Secretary, Biological Secretary, Medical Secretary and the General Secretary).

No. 13. 30-9-36.

Recommendations of the Annandale Memorial Medal Advisory Board. Accept.

No. 4. 17-12-36.

**MISCELLANEOUS—**

Recommendations of the Finance Committee of 23-1-36. Accept with the following modifications. Council subscriptions to be invited to meet expenditure of Council tea. The cost of the General Meeting tea to be debited to the Society.

No. 8. 27-1-36.

Application from Mohammed Yakoob that the Society may kindly let out to him a piece of vacant land on the south-eastern side of the Society's premises for opening an aerated water shop. Reject.

No. 14.

25-5-36.

Letter from the Asst. Private Secretary to H. E. the Governor of Bengal fixing the date for unveiling the portrait of the late Sir C. C. Ghose and asking for a provisional programme. The provisional programme of the ceremony to be as follows :—

- (1) The General Secretary will introduce Mr. D. C. Ghose, brother of the late Sir C. C. Ghose, a past President of the Society, in a few appropriate words.
- (2) Mr. D. C. Ghose will then present the portrait to the Society after a short speech.
- (3) The General Secretary will then receive the portrait formally after thanking Mr. D. C. Ghose, and respectfully request His Excellency to unveil it.
- (4) His Excellency will address the meeting and unveil the portrait.
- (5) Vote of thanks to His Excellency by the General Secretary for kindly unveiling the portrait.

The General Secretary reported that Mr. D. C. Ghose had written to him that His Excellency has accepted Mr. Ghose's invitation to tea with the guests in the rooms of the Society after the unveiling ceremony is over.

Resolved: That the guests should be the resident members of the Society as well as Mr. Ghose's friends and relatives who would be invited by the Council to be present at the unveiling ceremony; Mr. Ghose to make all necessary arrangements for tea including expenses.

No. 5.

25-5-36.

Letter of thanks from the family of the late Sir R. N. Mookerjee. Record.

No. 1.

22-6-36.

Report acceptances to the Society's invitation to the unveiling ceremony of the portrait of the late Sir C. C. Ghose. Record.

No. 4.

27-7-36.

The question of having a name plate at the gate. The General Secretary to arrange.

No. 14.

27-7-36.

Letter of thanks from Dr. B. Sahni for the congratulation sent to him on his being elected a Fellow of the Royal Society. Record.

No. 15.

27-7-36.

Report in the local press about the unveiling ceremony and At Home in the Society's Rooms on August 14th. Record.

No. 1.

25-8-36.

Report about repairs done to the frames containing photographs of all the past Presidents of the Society. Record.

No. 11.

25-8-36.

Letter from the Honorary Secretary, Himalayan Club, enquiring whether the Society would let out a corner room for the use of their club. Unable to rent out the corner room in view of the fact that it may be needed for the Society's own use.

No. 3.

30-9-36.

Letter of thanks from Dr. H. E. Stapleton. Record.  
No. 2. 24-11-36.

#### NATIONAL INSTITUTE OF SCIENCES OF INDIA—

Letter of thanks from the National Institute of Sciences of India.  
Record.  
No. 1. 27-1-36.

#### PATRON—

Letter to H. E. the Viceroy inviting him to accept the Patronship of the Society. Await instruction from the President; afterwards write to the Military Secretary to H. E. the Viceroy accordingly.  
No. 4. 25-5-36.

Reply to Private Secretary to H. E. the Viceroy regarding the patronage of the Society. Wait for reply from the President.  
No. 2. 22-6-36.

Letter of thanks to H. E. the Viceroy for the acceptance by him of office of a Patron of the Society. Record and announce in the Monthly Meeting.  
No. 1. 27-7-36.

#### PROVIDENT FUND—

Recommendation Finance Committee No. 7 of 23-1-36. Application from S. K. Roy for a loan of Rs.250 from the Provident Fund. Grant, to be returned in monthly instalments of Rs. 10 at 3% per annum. Accepted by Council.  
No. 8. 27-1-36.

Recommendation Finance Committee No. 8 of 23-1-36. Application from R. K. Iyer for a loan of Rs.250 from the Provident Fund. Grant, to be returned in monthly instalments of Rs.20 at 3% per annum. Accepted by Council.  
No. 8. 27-1-36.

Recommendation Finance Committee No. 4(b) of 21-2-36. Application for a loan of Rs.80 from the Provident Fund by B. B. Mukherjee. Grant as far as rules allow, subject to the Honorary Treasurer's approval. Interest at 3% per annum. Accepted by Council.  
No. 5. 24-2-36.

Recommendation Finance Committee No. 3 of 24-4-36. Application from K. Krishnamurti to be allowed to join the Society's Provident Fund. Decline. Accepted by Council.  
No. 6. 27-4-36.

#### PUBLICATIONS—

Centenary Volume. Record.  
No. 15. 27-1-36.

Letter from the President, Forest Research Institute, Dehra Dun, asking for the supply of the science part of the Journal only and for the corresponding reduction in subscription rates. Reject with appropriate explanation.  
No. 5. 31-3-36.



Recommendations of the Publication Committee. Accept. Publish Sayeed-ud-din's paper after having been edited by the Biological Secretary in consultation with Col. Chopra and Mr. Calder.

No. 8.

22-6-36.

Recommendation Publication Committee No. 6 of 24-11-36. That Sir U. N. Brahmachari be co-opted a member of the Publication Committee for the remainder of the year. Accepted by Council.

No. 10.

24-11-36.

#### REPRESENTATION—

Representation of the Society at a meeting at Government House on March 14th in commemoration of His late Majesty King George V. Record.

No. 1.

31-3-36.

#### REQUESTS—

Request for the use of the Society's Hall by the Himalayan Club. Approve.

No. 3.

27-1-36.

Request from the Joint Philological Secretary that the Society may purchase a number of biographical works for the Arabic and Persian Manuscript department, at a total cost of Rs.65-7-0. Purchase.

No. 13.

31-3-36.

Request by the Principal, Oriental College, Lahore, to insert an advertisement sheet in the next issue of the Journal. Grant against a nominal charge of Rs.10.

No. 12.

27-4-36.

Request from Ganapati Sircar, Calcutta, to be allowed to extend the period of the loan for a month and a half of 'Chandoga Parisista-tika'. Grant.

No. 8.

25-5-36.

Request for the use of the Society's Committee room for a Committee Meeting of the National Institute of Sciences of India on Saturday, the 27th June, at 5 p.m. Grant.

No. 10.

22-6-36.

Request from the Theosophical University Press, California, to send frequently works relating to Oriental studies published by the Society for reviewing in their 'Forum'. Supply them with price lists of the Society's publication.

No. 11.

22-6-36.

Request for the use of the Society's Lecture Hall by the Mining and Geological Institute of India. Record; General Secretary's action approved.

No. 2.

27-7-36.

Request from Messrs. G. W. Lawrie & Co., Lucknow, to be allowed to photograph two paintings belonging to the Society. Grant on condition that copies are supplied free to the Society and due acknowledgment made in the publication.

No. 3.

27-7-36.

Letter from Dr. Bains Prashad requesting sympathetic consideration of a request from the Field Museum of Natural History. Grant on exchange basis. The Field Museum of Natural History be requested to send us the back numbers of their publications which are lacking in the set, viz.:

- (a) Botanical Series from 1913-1936;
- (b) Zoological Series from 1913-1936;
- (c) Geological Series from 1913-1936;
- (d) Ornithological Series from 1906-1936;

in exchange for the back numbers of the Society's Proceedings and Journal as far as available.

The Field Museum be further requested to continue sending to the Society the above series without any break, in addition to the Anthropological and Report Series which are being received from them in exchange.

No. 5.

27-7-36.

Request for the use of the Society's Committee room and Lecture Hall on August 29th and 30th by the National Institute of Sciences of India. Grant.

No. 5.

25-8-36.

Request for an exchange of the Society's publications with the Trivandrum Sanskrit Series from the Curator, Publication of Oriental Manuscripts, Trivandrum. Exchange the Sanskrit publications of the Society with the Trivandrum Sanskrit Series.

No. 2.

30-9-36.

Request for the use of the Society's Hall by the Mining and Geological Institute of India. Grant.

No. 1.

17-12-36.

#### ROYAL CHARTER—

Letter from the Under Secretary to the Government of Bengal communicating that His Majesty has been pleased to grant permission to use the title 'Royal' by the Society. Record and announce in the next Monthly Meeting; inform all the members of the change of name; thanks of the Council to be communicated to His Excellency the Governor of Bengal for the kind help rendered by him in this matter, an appropriate letter be sent to the Government of Bengal conveying the thanks of the Society to His Majesty the King Emperor, for this great honour bestowed upon the Society.

No. 2.

25-5-36.

#### RULES AND REGULATIONS—

Statement of loans of manuscripts outstanding beyond three or more years. Recall all MSS. retained beyond the periods specified in the bonds, taking into accounts extensions granted, and drawing attention to the regulations regarding the loans of MSS.

Further resolved that a MSS. lending regulations revision committee be formed consisting of Col. Barwell, the two Philological Secretaries and the General Secretary, to draft a set of revised rules to be placed before the next meeting of the Council.

Also resolved that in future residents of Calcutta shall not except for special reasons be permitted to borrow MSS. from the Society's library but shall be permitted to consult them in the Society's rooms.

No. 3.

27-4-36.

**STAFF—**

Recommendation Finance Committee No. 4 of 23-1-36. Application from the Society's staff for the Indian Science Congress Bonus. Decline. Accepted by Council.

No. 8.

27-1-36.

Finance Committee No. 5 of 23-1-36. Remuneration to staff working on holidays. Recommendation: Hold over pending collection of information concerning practices in various offices. Accepted by Council.

No. 8.

27-1-36.

Recommendation Finance Committee No. 3(d) of 16-12-36. Increment of Salaries to Staff. The Honorary Treasurer and the General Secretary to put up the proposals; menials to get their usual increment. Accepted by Council.

No. 6.

17-12-36.

**List of  
Patrons,  
Officers, Council Members, Members,  
Fellows, and Medallists  
of the  
Royal Asiatic Society of Bengal,  
On the 31st December, 1936.**

## PATRONS OF THE ROYAL ASIATIC SOCIETY OF BENGAL.

1936 ..	.. H.E. the Most Hon'ble the Marquess of Linlithgow, P.C., Kt., G.M.S.I., G.M.I.E., O.B.E., D.L., T.D., Viceroy and Governor-General of India.
1932 ..	.. H.E. the Right Honourable Sir John Anderson, P.C., G.C.B., G.C.I.E., Governor of Bengal.
1910-1916	.. Lord Hardinge of Penshurst, K.G., P.C., G.C.B., G.C.M.G., G.C.S.I., G.C.I.E., G.C.V.O., I.S.O.
1917-1922	.. Marquess of Zetland, P.C., G.C.S.I., G.C.I.E.
1922-1927	.. Earl of Lytton, P.C., G.C.S.I., G.C.I.E.
1926-1931	.. Viscount Halifax, K.G., P.C., G.C.S.I., G.C.I.E.
1927-1932	.. Colonel Sir Francis Stanley Jackson, P.C., G.C.I.E.
1931-1936	.. Earl of Willingdon, G.M.S.I., G.C.M.G., G.M.I.E., G.B.E.

# OFFICERS AND MEMBERS OF COUNCIL OF THE ROYAL ASIATIC SOCIETY OF BENGAL DURING THE YEAR 1936.

## Elections Annual Meeting.

### *President*

H.E. The Rt. Hon'ble Sir John Anderson, P.C., G.C.B., G.C.I.E.

### *Vice-Presidents.*

Sir David Ezra, Kt., F.Z.S., M.B.O.U.

Rai Sir Upendra Nath Brahmachari Bahadur, Kt., M.A., M.D., Ph.D., F.A.S.B.

Lt.-Col. R. Knowles, C.I.E., B.A. (Cantab.), M.R.C.S., L.R.C.P., I.M.S., F.A.S.B.

The Hon'ble Sir B. L. Mitter, K.C.S.I., Kt., Barrister-at-Law.

### *Secretaries and Treasurer*

General Secretary:—Johan van Manen, Esq., C.I.E., F.A.S.B.

Treasurer:—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S., F.R.S.E., F.A.S.B.

Philological Secretary:—S. K. Chatterji, Esq., M.A., D.Lit. (London).

Joint Philological Secretary:—Shamsul Ulama Mawlawi M. Hidayat Hosain, Khan Bahadur, Ph.D., F.A.S.B.

Natural History Secretaries.  $\left\{ \begin{array}{l} \text{Biology:—Baini Prashad, Esq., D.Sc., F.Z.S., F.R.S.E., F.A.S.B.} \\ \text{Physical Science:—J. N. Mukherjee, Esq., D.Sc. (Lond.), F.C.S. (Lond.).} \end{array} \right.$

Anthropological Secretary:—Rai Bahadur Ramaprasad Chanda, B.A., F.A.S.B.

Medical Secretary:—Lt.-Col. R. N. Chopra, C.I.E., M.A., M.B., I.M.S., F.A.S.B.

Library Secretary:—A. M. Heron, Esq., D.Sc. (Edin.), F.G.S., F.R.G.S., F.R.S.E.

### *Other Members of Council.*

Percy Brown, Esq., A.R.C.A., F.A.S.B.

C. C. Calder, Esq., B.Sc., F.L.S.

N. G. Majumdar, Esq., M.A.

Lt.-Col. N. Barwell, M.C., M.A., Barrister-at-Law.

K. C. Mahindra, Esq., B.A. (Cantab.).

M. Mahfuz-ul Haq, Esq., M.A.

### APPOINTMENTS, TRANSFERS, AND OTHER CHANGES DURING THE YEAR.

Sir U. N. Brahmachari, Acting General Secretary, *vice* Mr. Johan van Manen, absent, from 16-5-36 to 16-11-36.

Mr. Percy Brown, Acting Library Secretary, *vice* Dr. A. M. Heron, absent, from 1-8-36 to 27-11-36.

Mr. Johan van Manen, Acting Honorary Treasurer, *vice* Dr. S. L. Hora, absent, from 24-1-36 to 7-2-36; from 16-11-36 to 24-11-36 and from 16-12-36 to 31-12-36.

H.E. Sir John Anderson, absent from 8-4-36 to 1-8-36 and from 1-9-36 to 3-11-36.

Sir David Ezra, absent from 16-4-36 to 1-11-36.

Sir B. L. Mitter, absent from 15-4-36 to 14-8-36.

Lt.-Col. R. Knowles, died on 3-8-36.

Dr. B. Prashad, absent from 20-5-36 to 1-7-36.

Dr. J. N. Mukherjee, absent from 19-10-36 to 14-11-36.

Dr. M. H. Hosain, absent from 25-9-36 to 25-10-36.

R.B. R. Chanda, absent from 1-4-36 to 10-5-36.

Bt.-Col. R. N. Chopra, absent from 15-4-36 to 15-8-36.

# OFFICERS AND MEMBERS OF COUNCIL OF THE ROYAL ASIATIC SOCIETY OF BENGAL ELECTED FOR THE YEAR 1937.

## *President.*

H.E. The Rt. Hon'ble Sir John Anderson, P.C., G.C.B., G.C.I.E.

## *Vice-Presidents.*

Rai Sir Upendra Nath Brahmachari Bahadur, Kt., M.A., M.D.,  
Ph.D., F.R.A.S.B.

A. M. Heron, Esq., D.Sc. (Edin.), F.G.S., F.R.G.S., F.R.S.E.,  
F.R.A.S.B.

Percy Brown, Esq., A.R.C.A., F.R.A.S.B.

Lt.-Col. N. Barwell, M.C., M.A., Barrister-at-Law.

## *Secretaries and Treasurer.*

General Secretary :—Johan van Manen, Esq., C.I.E.,  
F.R.A.S.B.

Treasurer :—S. L. Hora, Esq., D.Sc. (Edin.), F.Z.S., F.R.S.E.,  
F.R.A.S.B.

Philological Secretary :—S. K. Chatterji, Esq., M.A., D.Lit.  
(London), F.R.A.S.B.

Joint Philological Secretary :—Shamsu'l 'Ulama Mawlawi  
M. Hidayat Hosain, Khan Bahadur, Ph.D., F.R.A.S.B.

Natural History Secretaries. { Biology :—Baini Prashad, Esq., D.Sc., F.Z.S.,  
F.R.S.E., F.R.A.S.B.  
Physical Science :—J. N. Mukherjee, Esq.,  
D.Sc. (Lond.), F.C.S. (Lond.).

Anthropological Secretary :—Rai Bahadur Ramaprasad Chanda,  
B.A., F.R.A.S.B.

Medical Secretary :—Bt.-Col. R. N. Chopra, C.I.E., M.A., M.B.,  
I.M.S., F.R.A.S.B.

Library Secretary :—M. Mahfuz-ul Haq, Esq., M.A.

## *Other Members of Council.*

C. C. Calder, Esq., B.Sc., F.L.S.

N. G. Majumdar, Esq., M.A., F.R.A.S.B.

K. C. Mahindra, Esq., B.A. (Cantab.).

The Hon'ble Mr. Justice John Lort-Williams, Kt., K.C.

B. S. Guha, Esq., M.A., Ph.D. (Harvard).

W. D. West, Esq., M.A. (Cantab.).

## ORDINARY MEMBERS.

R=Resident. N=Non-Resident. F=Foreign. A=Absent. L=Life.

An Asterisk is prefixed to names of Ordinary Fellows of the Society.

Date of Election.		
5-4-22	R	<b>Abdul Ali</b> , ABUL FAIZ MUHAMMAD, M.A., M.B.A.S., F.R.S.L., F.R.G.S., F.R.H.S. 3, Turner Street, Calcutta.
7-3-27	R	<b>Abdul Kadir</b> , A. F. M., M.A. (ALLAHABAD), MAULVIE FAZII (PUNJAB), MADRASSAH FINAL (CALCUTTA), <i>Professor, Islamia College</i> . 19, Wellesley Square, Calcutta.
2-11-25	N	<b>Acharya</b> , PARAMANANDA, B.SC., <i>Archæological Scholar</i> . Mayurbhanj State, Baripada.
2-3-21	R	<b>Agharkar</b> , SHANKAR PURUSHOTTAM, M.A., PH.D., F.L.S., <i>Sir Rash Behari Ghose Professor of Botany, Calcutta University</i> . 35, Ballygunge Circular Road, Calcutta.
3-2-36	N	<b>Ahmad</b> , ALFAZUDDIN KHAN BAHADUR, M.A., <i>Retired Assistant Director of Public Instruction, Bengal</i> . Dhalhora, P.O. Tamluk, Midnapur.
1-1-34	N	<b>Ahmad</b> , MIAN JAMAL-UD-DIN, B.A., B.T., <i>Member, Bureau of Education, Afghanistan</i> . 2, Andrabi, Kabul, Afghanistan.
6-6-17	N	<b>Aiyangar</b> , K. V. RANGASWAMI, RAO BAHADUR, M.A., <i>Late Director of Public Instruction, Travancore; Principal, Central Hindu College, Hindu University</i> . Benares.
6-12-26	N	<b>*Aiyangar</b> , S KRISHNASWAMI, M.A., PH.D., M.B.A.S., F.R.HIST.S., F.R.A.S.B., <i>Rajasevasakta, Professor, University of Madras</i> . "Sripadam", 143, Brodies Road, Mylapore, Madras, S.
1-12-20	N	<b>Akbar Khan</b> , THE HON'BLE MAJOR NAWAB SIR MOHAMMED, K.B.E., C.I.E., <i>Khan of Hoti</i> . Hoti, N.-W.F.P.
6-1-36	R	<b>Anderson</b> , HIS EXCELLENCY THE RT. HON'BLE SIR JOHN, P.C., G.C.B., G.C.I.E., <i>Governor of Bengal, Calcutta</i> .
3-7-12	F	<b>Andrews</b> , EGBERT ARTHUR, B.A. c/o The Royal Empire Society, Northumberland Avenue, London, W.C.
3-3-30	L	<b>Ashton</b> , HUBERT SHORBOCK, <i>Merchant</i> . Trueloves, Ingates-tone, Essex, England.
3-9-34	R	<b>Auden</b> , JOHN BICKNELL, M.A. (CANTAB.), F.G.S., <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
3-11-30	R	<b>Austin</b> , GEORGE JOHN, <i>Sanitary Engineer, Messrs. J. B. Norton &amp; Sons, Ltd.</i> Norton Building, Lalbazar, Calcutta.
4-4-17	N	<b>Awati</b> , P. R., B.A. (CANTAB.), D.L.C., I.E.S., <i>Professor of Zoology</i> . Royal Institute of Science, Mayo Road, Fort, Bombay.
3-3-14	L	<b>*Bacot</b> , J., F.R.A.S.B. Boulevard Saint-Antoine, 61, Versailles Seine-et-Oise, France.
7-9-36	R	<b>Bagchi</b> , KUMAR NATH. RAI BAHADUR, B.SC., M.B. (CAL), D.T.M. (CAL. & L'POOL), F.I.C. (LOND.), <i>Chemical Examiner to the Government of Bengal</i> . Medical College, Calcutta.



Date of Election.		
1-11-26	R	<b>Bagchi, PROBODH CHANDRA, M.A., DR.-ES-LETTRES (PARIS),</b> <i>Member of the A.S. of Paris; Lecturer, Calcutta University.</i> 9, Rustomjee Street, Ballygunge, Calcutta.
1-3-26	R	<b>Bagnall, JOHN FREDERICK, B.Sc., A.M.I.MECH.E., A.M.I.E.E., A.M.INST.C.E.,</b> <i>Consulting Engineer, Messrs. Macneill &amp; Co.</i> 2, Fairlie Place, Calcutta.
2-4-24	N	<b>Bahl, K. N., D.Sc., D.PHIL.,</b> <i>Professor of Zoology, Lucknow University.</i> Badshabagh, Lucknow.
7-3-27	A	<b>Bake, A. A., Doctorandus Or. Lit.</b> P.O. Santiniketan. (c/o The Kern Institute, Leiden, Holland.)
6-2-18	N	<b>Banerjee, NARENDRA NATH, M.I.P.O.E.E., A.M.I.E.,</b> <i>Director of Telegraphs, Bombay Circle, Bombay.</i>
5-3-24	R	<b>Banerjee, P. N., M.A. (CANTAB.), A.M.I.E., F.C.U.,</b> <i>Civil Engineer.</i> 12, Mission Row, Calcutta.
1-11-26	N	<b>Barhut, THAKUR KISHORE SINGH JI,</b> <i>State Historian of Patiala Government.</i> History and Research Department, Patiala
3-8-31	N	<b>Barua, THE HON'BLE KANAK LAL, RAI BAHADUR, B.L., F.R.S.E.,</b> <i>President, Kamarupa Anusundhan Samiti, Minister to the Government of Assam.</i> Rosaville, Nangthymai, Shillong, Assam.
3-12-23	R	<b>Barwell, N. F., LT.-COL. (RETD.), M.C., M.A.,</b> <i>Bar-at-Law.</i> First Floor, 10, Middleton Street, Calcutta (and) Aylmerton House, Aylmerton, Norfolk, England.
4-3-29	R	<b>Basu, THE HON'BLE BEJOY K., C.I.E., M.A., B.L.,</b> <i>Solicitor, High Court.</i> 50, Goaltule Road, Bhawanipore, Calcutta.
3-12-24	R	<b>Basu, JATINDRA NATH, M.A., M.L.C.,</b> <i>Solicitor.</i> 14, Balorani Ghose Street, Calcutta.
1-3-26	R	<b>Basu, NARENDRA KUMAR, M.L.C.,</b> <i>Advocate, High Court.</i> 12, Ashu Biswas Road, Bhawanipore, Calcutta
2-1-28	R	<b>Basu, NARENDRA MOHAN, M.Sc.,</b> <i>Professor of Physiology.</i> 63, Hindusthan Park, Ballygunge, Calcutta.
30-9-35	N	<b>Basu, SATYENDRA KUMAR, M.Sc.,</b> <i>Extra Assistant Conservator of Forests.</i> Clover Cot, Darjeeling.
5-2-34	N	<b>Bates, WILLIAM HAYES,</b> <i>Ceramic Engineer, Burn &amp; Co., Ltd.</i> Ranigunj, Dt. Burdwan.
7-7-09	N	<b>Bazaz, RANGNATH KHEMRAJ,</b> <i>Proprietor, Shri Venkateshwar Press.</i> 7th Khetwadi, Bombay No. 4.
7-5-34	R	<b>Bent, WILLIAM ANTONY,</b> <i>Assistant, Messrs. George Henderson &amp; Co., Ltd.</i> 101/1, Clive Street, Calcutta.
4-3-25	R	<b>Benthall, SIR EDWARD C., KT.,</b> <i>Merchant.</i> 37, Ballygunge Park, Calcutta.
7-4-09	L	<b>*Bentley, CHARLES A., C.I.E., M.B., D.P.H., D.T.M. &amp; H., F.R.A.S.B.,</b> <i>Professor of Hygiene.</i> University of Egypt, Cairo.
6-1-36	N	<b>Berkeley-Hill, OWEN ALFRED ROWLAND, M.A., M.D., B.CH. (OXON.), M.R.C.S. (ENGLAND), D.T.M. (LONDON), LT.-COL., I.M.S. (RETD.),</b> 'Station View', Ranchi. B. & O.
4-6-28	N	<b>Bhadra, SATYENDRA NATH, RAI BAHADUR, M.A.,</b> <i>Principal, Jagannath Intermediate College.</i> Nayabazar, Dacca.
1-8-17	R	<b>*Bhandarkar, DEVADATTA RAMKRISHNA, M.A., PH.D., F.R.A.S.B.</b> 10, Ritchie Road, Ballygunge, Calcutta.
5-4-26	N	<b>Bhatia, M. L., M.Sc.,</b> <i>Lecturer in Zoology.</i> Lucknow University, Lucknow.
1-2-22	N	<b>Bhattacharya, VIDHUSHEKHARA, PANDIT,</b> <i>Principal, Vidyabhavana.</i> Visvabharati, Santiniketan, Birbhum.
7-7-24	L	<b>Bhattacharyya, BINOYTOSH, M.A., PH.D., RAJARATNA,</b> <i>General Editor, Gaekwad's Oriental Series, and Librarian, Oriental Collections, Baroda State.</i> Baroda.

Date of Election		
2-4-28	R	<b>Bhattacharyya, NIRABAN CHANDRA, M.A.,</b> <i>Professor of Physiology, Presidency College.</i> 19, Hindusthan Road, Ballygunge, Calcutta.
4-6-28	N	<b>Bhattachali, NALINI KANTA, M.A., PH.D.,</b> <i>Curator, Dacca Museum.</i> Ramna, Dacca.
6-4-31	R	<b>Bhose, JOTISH CHANDER, M.A., B.L.,</b> <i>Advocate, Calcutta High Court.</i> 244, Ray Bagan Street, Calcutta.
5-2-34	N	<b>Bhuyan, SURYYA KUMAR, RAI BAHADUR, M.A., B.L., A.E.S.,</b> <i>Honorary Provincial Director of Historical and Antiquarian Studies, Assam; Professor, Cotton College.</i> Gauhati, Assam.
5-3-28	R	<b>Biswas, CHARU CHANDRA, C.I.E., M.A., B.L.,</b> <i>Advocate, High Court.</i> 58, Puddopukur Road, P.O. Elgin Road, Calcutta.
1-8-23	L	<b>Biswas, KALIPADA, M.A.</b> Royal Botanic Garden, Sibpur, Howrah.
3-1-27	N	<b>Bivar, HUGH GODFREY STUART, I.C.S.,</b> <i>District and Sessions Judge.</i> Murshidabad.
2-12-35	N	<b>Blakiston, J. F.,</b> <i>Director-General of Archaeology.</i> New Delhi.
1-2-93	L	<b>*Bodding, REV. P. O, M.A (CHRIST.), F.R.A.S.B.</b> Gulleraasveien 27, Vettakollen, Oslo, Norway.
4-11-35	A	<b>Bor, N. L, M.A, D.SC., F.L.S., I.F.S.</b> c/o The Conservator of Forests, Shillong, Assam.
6-3-95	R	<b>*Bose, SIR JAGADIS CHANDRA, KT, C.S.I., C.I.E., F.R.S., M.A., D.SC., F.R.A.S.B.</b> Bose Institute, 91, Upper Circular Road, Calcutta
6-7-25	R	<b>Bose, MANMATHA MOHAN, M.A.,</b> <i>Professor Emeritus, Scottish Church College.</i> 19, Gokul Mitra Lane, Hatkhola, Calcutta.
2-3-31	N	<b>Bose, SUDHANSU KUMAR, B.SC. (CAL.), A.R.S.M., B.S.C. (MINING) (LONDON),</b> <i>Professor of Mining and Surveying.</i> Indian School of Mines, Dhanbad.
2-11-36	R	<b>Bothra, SUBHKARAN, B.A.,</b> <i>Landholder and Student.</i> 3, Vivekananda Road, Calcutta.
4-5-31	A	<b>Bottomley, JOHN MELLOR, B.A. (OXON), I.E.S.,</b> <i>Director of Public Instruction, Bengal.</i> 1, Sunny Park, Ballygunge, Calcutta.
5-12-32	N	<b>Boyle, CECIL ALEXANDER, MAJOR, D.S.O.,</b> <i>Adviser in Languages and Secretary to the Board of Examiners.</i> Army Headquarters, Simla.
3-12-34	R	<b>Brahmachari, PHANINDRA NATH, M.SC., M.B.</b> 82/3, Cornwallis Street, Calcutta.
1-1-08	L	<b>*Brahmachari, SIR UPENDRA NATH, KT., RAI BAHADUR, M.A., PH.D., M.D., F.S.M.F., F.R.A.S.B.</b> 82/3, Cornwallis Street, Calcutta.
7-11-27	N	<b>Brahmachary, SARAT CHANDRA, RAI BAHADUR, M.A., B.T.</b> Kasba Road, Ballygunge, P.O. Dhakuria, 24-Pergs.
6-1-36	R	<b>Brocke, ALFRED G., D.SC. (DOCTOR PHILOSOPHÆ NATURALIS) (JENA),</b> <i>Branch Manager, Pharmaceutical Department, 'Bayer'.</i> 11, Store Road, Ballygunge, Calcutta.
3-7-07	L	<b>*Brown, JOHN COGGIN, O.B.E., D.SC., F.G.S., M.I.M.E., M.INST.M.M., M.I.E., F.R.A.S.B.</b> c/o Messrs. Grindlay & Co., 54, Parliament Street, Westminster, London, S.W.1.
6-10-09	R	<b>*Brown, PERCY, A.R.C.A., F.R.A.S.B.,</b> <i>Curator, Victoria Memorial.</i> Calcutta.
8-1-96	F	<b>*Burn, SIR RICHARD, KT., C.S.I., F.R.A.S.B.</b> 9, Staverton Road, Oxford, England.

Date of Election.		
3-12-34	N	<b>Burt, SIR BRYCE CHUDLEIGH, KT., C.I.E., M.B.E., B.SC., I.A.S.,</b> <i>Agricultural Expert, Imperial Council of Agricultural Research.</i> 1, York Road, New Delhi.
2-4-13	R	<b>Calder, CHARLES CUMMING, B.SC., F.L.S.,</b> <i>Superintendent, Royal Botanic Garden.</i> Sibpur, Howrah.
4-11-29	R	<b>Campbell, SIR GEORGE R., KT.,</b> <i>Partner, Messrs. Mackinnon Mackenzie &amp; Co.</i> 16, Strand Road, Calcutta.
7-2-27	R	<b>Captain, DARA MANEKSHAW, Merchant.</b> 1, Corporation Street, Calcutta.
3-2-36	R	<b>Catto, SIR THOMAS S., BART.,</b> <i>Merchant and Banker, Andrew Yule &amp; Co., Ltd.</i> 8, Clive Row, Calcutta.
1-9-20	R	<b>Chakladar, HARAN CHANDRA, M.A.</b> 28/4, Srimohan Lane, Kalighat, Calcutta.
7-3-32	R	<b>Chakraborty, KHIRODE BEHARI,</b> <i>Engineer and Manufacturer.</i> 7, Hindusthan Park, P.O. Ballygunge, Calcutta.
4-7-27	R	<b>Chakravarti, CHINTAHARAN, M.A.,</b> <i>Lecturer, Bethune College.</i> 28/3, Sahanagar Road, Kalighat, Calcutta.
3-2-30	N	<b>Chakravarti, M. N., M.SC., A.T.S.</b> 'Gitanjali'. 15, Lodge Road, Lahore.
5-6-33	N	<b>Chakravarti, SUSIL KUMAR, M.A.,</b> <i>Zemindar.</i> Cooch Behar (Cooch Behar State).
3-1-27	N	<b>Chakravarty, NIRANJANPRASAD, M.A., PH.D. (CANTAB.),</b> <i>Government Epigraphist.</i> Office of the Government Epigraphist, Ootacamund, Nilgiris, S. India.
6-1-30	A	<b>Chakraverti, SRISH CHANDRA, B.L.,</b> <i>Attorney-at-Law, High Court, Calcutta.</i> 2, Marquis Street, Calcutta.
1-9-20	R	<b>*Chanda, RAMAPRASAD, RAI BAHADUR, B.A., F.R.A.S.B.</b> P. 403, Manoharpukur Road, Kalighat, Calcutta.
3-1-06	L	<b>Chapman, JOHN ALEXANDER,</b> <i>Librarian, Rampur State Library.</i> Rampur.
7-5-28	R	<b>Chatterjee, SIR NALINI RANJAN, KT., M.A., B.L.,</b> <i>Retired Judge and sometime acting Chief Justice, Calcutta.</i> 91A, Harish Mukerjee Road, Bhawanipore, Calcutta.
7-2-27	R	<b>Chatterjee, ASHOKE, B.A. (CAL.), B.A. (CANTAB.),</b> <i>Editor, 'Welfare'.</i> 91, Upper Circular Road, Calcutta.
27-10-15	F	<b>Chatterjee, SIR ATUL CHANDRA, K.C.I.E., K.C.S.I.,</b> <i>Late High Commissioner for India.</i> Withdean. Cavendish Road, Weybridge, Surrey, England.
2-3-36	R	<b>Chatterjee, MANOMOHAN, B.SC. (CAL.), A.R.C.S., D.I.C., PH.D. (LOND.),</b> <i>Professor of Geology, Presidency College.</i> 170/2, Lower Circular Road, P.O. Entally, Calcutta.
1-10-20	R	<b>Chatterjee, NIRMAL CHANDRA.</b> 52, Haris Mukerjee Road, Bhawanipore, Calcutta.
4-7-27	R	<b>Chatterjee, PATIPABON, M.A., B.L.,</b> <i>Vakil, High Court.</i> 84, Harrison Road, Calcutta.
3-12-34	R	<b>Chatterjee, SISIR CHANDRA, M.D. (EDIN.), M.R.C.P. (EDIN.), D.P.H. (EDIN.),</b> <i>Chief Medical Officer, E.B. Ry.</i> 3, Koilghat Street, Calcutta.
5-1-31	R	<b>Chatterji, DURGACHARAN, M.A.,</b> <i>Lecturer in Sanskrit, Bethune College.</i> P. 317, Jatin Das Road, Kalighat, Calcutta.
4-6-34	N	<b>Chatterji, BIJAN RAJ, PH.D. (London), D.LITT. (PUNJAB),</b> <i>Professor of History, Meerut College.</i> Meerut.
7-5-28	R	<b>Chatterji, KEDAR NATH, B.SC. (LONDON), A.E.C.S. (LONDON).</b> 43, Wellesley Street, Calcutta.
7-6-11	R	<b>Chatterji, KARUNA KUMAR, LT.-COL., I.T.F., M.C., V.H.A.S.</b> 6/1, Wood Street, Calcutta.

Date of Election.		
6-8-24	R	*Chatterji, SUNITI KUMAR, M.A. (CAL.), D.LIT. (LONDON), F.R.A.S.B., <i>Khaira Professor of Linguistics, Calcutta University</i> . 'Sudharma', 16, Hindusthan Park, (off Rasbihari Avenue East End), Ballygunge, Calcutta.
2-3-36	R	Chatterji, MRS. TUHINIKĀ, M.A., KĀVYATIRTHA, <i>Research Scholar, Examiner, Calcutta University</i> . 5, Wood Street, Calcutta.
5-11-24	R	Chattopadhyay, K. P., M.SC., <i>Education Officer, Corporation of Calcutta</i> . 55/1, Old Ballygunge 1st Lane, Calcutta.
2-11-25	N	Chattopadhyaya, KSHETRESA CHANDRA, M.A., <i>Lecturer in Sanskrit</i> . Allahabad University, Allahabad.
1-4-14	R	Chaudhuri, GOPAL DAS. 32, Beadon Row, Calcutta.
4-11-35	R	Chaudhuri, SACHINDRA NATH, <i>Barrister-at-Law</i> . 52, Ballygunge Circular Road, Calcutta.
5-12-23	R	Chopra, B. N., D.SC., F.L.S., <i>Assistant Superintendent, Zoological Survey of India</i> . Indian Museum, Calcutta.
1-2-22	R	*Chopra, R. N., C.I.E., M.A., M.D. (CANTAB.), BREVET.-OOL., I.M.S., F.R.A.S.B., <i>Professor of Pharmacology</i> . School of Tropical Medicine and Hygiene, Chittaranjan Avenue, Calcutta.
5-12-27	L	Chowdhury, SIR CHHAJURAM, KT., C.I.E., M.L.O. 21, Belvedere Road, Calcutta.
2-4-28	R	Chowdhury, RAI JATINDRANATH, <i>Zemindar</i> . 36, Russa Road, Tollygunge, Calcutta.
3-7-07	L	*Christie, WILLIAM ALEXANDER KYNOCH, B.SC., PH.D., M.INST.M.M., F.R.A.S.B. c/o The Lloyds Bank, 6, Pall Mall, London, 8. W. 1.
3-11-09	A	*Christophers, SIR SAMUEL RICKARD, KT., C.I.E., O.B.E., F.R.S., F.R.A.S.B., M.B., LT.-COL., I.M.S. 80, Onslow Gardens, South Kensington, London, S.W. 7.
1-9-15	R	Cleghorn, MAUDE LINA WEST (MISS), F.L.S. F.E.S. 43, Moulahat Road, Calcutta.
2-2-31	A	Clough, JOHN, <i>Barrister-at-Law</i> . 17, Store Road, Ballygunge, Calcutta.
5-5-30	F	Cooper, G. A. P. 29, Eccleston Street, Eaton Square, London, S.W. 1.
3-9-34	R	Couchman, BRIGADIER HAROLD JOHN, D.S.O., M.C., <i>Surveyor-General of India</i> . Survey of India, 13, Wood Street, Calcutta.
6-11-33	R	Coulson, ARTHUR LENNOX, D.SC. (MELB.), D.I.C., F.G.S. <i>Geological Survey of India</i> , 27, Chowringhee, Calcutta.
4-11-29	L	*Cotter, GERALD DE PUROELL, B.A., SO.D. (DUBLIN), M.INST.M.M., F.G.S., F.R.A.S.B. 'Fallowfield', Manor Road, Penn., Bucks., England.
5-3-34	R	Craddock, SIR WALTER MERRY, KT., D.S.O., COLONEL, M.C., <i>Stock Broker</i> . Bengal Club, Calcutta.
25-8-87	R	Criper, WILLIAM RISON, F.O.S., F.I.C., A.R.S.M. Konnagar.
2-11-25	A	Crookshank, HENRY, B.A., B.A.I. (DUBLIN), <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
7-12-36	R	Daga, MADANGOPAL, <i>Merchant and Landlord</i> . 374, Upper Chitpore Road, Calcutta.
7-3-32	R	Darbari, M. D., <i>Incorporated Accountant, S.B. Billimoria &amp; Co., Ltd.</i> 100, Clive Street, Calcutta.
4-3-25	R	Das, AJIT NATH, RAI BAHADUR, M.B.A.S., F.Z.S., <i>Zemindar</i> . 24, South Road, Entally, Calcutta.

Date of Election.		
3-12-24	R	Das, SURENDRA NATH, M.B., <i>Medical Practitioner</i> . 67, Nimtala Ghat Street, Calcutta.
6-9-22	R	Das-Gupta, SURENDRA NATH, M.A., PH.D., I.E.S., <i>Principal, Sanskrit College</i> . 1, College Square, Calcutta.
1-3-26	R	Datta, HIRENDRA NATH, M.A., B.L., <i>Solicitor, High Court</i> . 139, Cornwallis Street, Calcutta.
3-6-25	N	Datta, S. K., B.A., M.B., CH.B. (EDIN.), <i>Principal, Forman Christian College</i> . Lahore.
4-6-34	R	Daver, NANABHOY SORABJI, B.A. (HONS.), <i>Mercantile</i> . c/o Parke, Davis & Co., 5, Dhurumtollah Street, Calcutta.
6-8-24	L	Davies, L. M., LT.-COL., LATE R.A., M.A., F.R.S.E., F.R.A.I., F.G.S. 8, Garscube Terrace, Murrayfield, Edinburgh, 12, Scotland.
4-3-29	R	De, J. C., M.B., LT.-COL., I.M.S., <i>Superintendent, Campbell Medical School</i> . 135, Lower Circular Road, Calcutta.
19-9-95	L	De, KIRAN CHANDRA, C.I.E., B.A., I.C.S. (RETD.), <i>Manager, Nawab Bahadur of Murshidabad Estate</i> . Lalbagh, Murshidabad.
5-12-32	N	Deb, SUSHIL KUMAR, B.A. Sheikghat, P.O. Sylhet, Dt. Assam.
5-12-27	L	Dechhen, H.H. MAHARANI KUNZANG, <i>Maharani of Sikkim</i> . Gangtok, Sikkim.
5-5-30	N	Deo, SIR PRATAP CHANDRA BHANJ, K.C.I.E., <i>Maharajah, Ruler of Mayurbhanj State</i> . P.O. Baripada, Mayurbhanj, B.N.R.
5-11-34	R	Dey, MUKUL, A.R.C.A. (LOND.), M.C.S.E. (U.S.A.), F.R.S.A., etc., <i>Principal, Govt. School of Art; Officer in charge, Art Section; Keeper of Govt. Art Gallery; Trustee, Indian Museum</i> . 28, Chowringhee, Calcutta.
4-5-10	L	Dhavit, THE HON'BLE MR. JUSTICE SHANKAR BALAJI, B.A., I.C.S., <i>Judge, Patna High Court</i> . Patna.
4-8-20	N	Dikshit, KASHINATH NARAYAN, M.A. c/o The Office of the Director-General of Archaeology, New Delhi.
5-1-98	R	Dods, WILLIAM KANE, <i>Agent, Hongkong and Shanghai Banking Corporation</i> . 6, Minto Park, Alipur, Calcutta.
2-2-31	A	Douglas, GORDON WATSON, B.SC., D.L.M., <i>State Chemist to the Government of Bhopal</i> . State Laboratory, Bhopal, Central India.
2-7-02	L	Doxey, FREDERICK. 'Ballygunge', Cooden Drive, Bexhill-on-Sea, Sussex, England.
7-11-32	R	Driver, DARAB CURSETJI, M.A. (CANTAB.), <i>Barrister-at-Law, Constituted Attorney to Messrs. Tata &amp; Sons, Ltd., Managing Agents for The Tata Iron &amp; Steel Co., Ltd.</i> 71/73, Park Street, Calcutta.
7-5-34	R	Duncan, PERCIVAL CAIRNCROSS, <i>Mercantile Assistant with Messrs. George Henderson &amp; Co., Ltd.</i> 101/1, Clive Street, Calcutta.
1-7-29	A	Dunn, JOHN ALEXANDER, D.SC., D.I.C., F.G.S., <i>Assistant Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.
2-1-33	N	Dutch, ROBERT AUSTEN, B.A. (CANTAB.), I.C.S., <i>District Magistrate</i> . Noakhali.
3-7-33	A	Dutt, GURU SADAY, <i>Barrister-at-Law</i> , I.C.S. 12, Loudon Street, Calcutta.
30-9-35	R	Dutt, MOHENDRA NATH, L.E., <i>Consulting Engineer</i> . 12, Kailas Bose Lane, Howrah.
5-12-32	R	Dutt, NALINAKSHA, M.A., PH.D., D.LITT. (LOND.), <i>Lecturer, Calcutta University</i> . 91-1B, Manicktollah Street, Calcutta.

Date of Election.		
5-3-28	A	Eberl, OTTO, DR. JUR., <i>Late Vice-Consul for Germany.</i> 2, Store Road, Ballygunge, Calcutta.
4-11-29	R	Edwards, L. BROOKE, <i>Manager in India. The Baldwin Loco. Works of Philadelphia, U.S.A.</i> 5, Dalhousie Square, Calcutta.
5-1-31	L	Evans, PERCY, B.A. (CANTAB.), F.G.S., <i>Geologist.</i> c/o The Burma Oil Co., Digboi, Assam.
6-2-28	L	Ezra, SIR DAVID, KT., F.Z.S., M.B.O.U. 3, Kyd Street, Calcutta.
2-12-29	N	Fawcus, LOUIS REGINALD, B.A. (CANTAB.), <i>Indian Civil Service, Magistrate and Collector.</i> Dacca
3-8-04	L	*Fermor, SIR LEWIS LEIGH, KT., O.B.E., M.INST.M.M., D.SC., A.R.S.M., F.G.S., F.R.S., F.R.A.S.B., <i>Director, Geological Survey of India.</i> 27, Chowringhee, Calcutta.
31-10-06	F	Finlow, ROBERT STEEL, C.I.E., B.SC., F.I.C., <i>Late Director of Agriculture, Bengal.</i> c/o Messrs. Grindlay & Co., Ltd., 54, Parliament Street, London, S.W. 1.
3-2-36	R	Flury, ERNEST CHARLES, <i>Merchant, Manager of Messrs. Volkart Brothers.</i> 11, Clive Street (Post Box No. 606), Calcutta.
5-11-13	R	Fox, CYRIL S., D.SC. (BIRM.), M.I.M.E., F.U.S. <i>Geologica Survey of India,</i> 27, Chowringhee, Calcutta.
7-3-27	F	Fukushima, NAOSHIO. 33, Hikawacho, Akasaka, Tokyo, Japan.
5-11-28	R	Galstaun, JOHN CARAPIET, O.B.E., <i>Merchant and Landholder.</i> 234/4, Lower Circular Road, Calcutta.
1-11-26	R	Galstaun, SHANAZAN, M.A., D.M.R.E., M.R.C.S., L.R.C.P., <i>Medical Practitioner, Radiologist, Medical College Hospital.</i> 39, Theatre Road, Calcutta.
6-10-09	R	*Gangoly, ORDHENDRA COOMAR, B.A., F.R.A.S.B. 2, Asutosh Mukherjee Road, Calcutta.
7-9-36	R	Gangooly, PHANINDRA LAL, M.A., <i>Lecturer in Mathematics, Calcutta University.</i> P-507, Rash Behari Avenue, Calcutta.
5-11-34	R	Gee, EDWARD ROWLAND, M.A. (CANTAB.), F.G.S., <i>Assistant Superintendent, Geological Survey of India.</i> 27, Chowringhee, Calcutta.
2-1-33	R	George, JAMES, B.A. (CANTAB.), I.C.S., <i>Special Officer, Political Department, Govt. of Bengal.</i> United Service Club, Calcutta.
6-2-33	L	Ghatak, JYOTISH CHANDRA, M.A. (TRIPLE), SAHITYA SARASWATI, JYOTISH-SAGARA, <i>Professor.</i> 4, Boloram Bose Ghat Road, Bhawanipore, Calcutta.
7-5-28	R	Ghosal, UPENDRA NATH, M.A., PH.D., <i>Professor of History, Presidency College.</i> 12, Badur Bagan Row, Calcutta.
5-4-26	R	Ghose, BIMAL CHANDRA, <i>Barrister-at-Law.</i> 27/1, Harish Mukherjee Road, Calcutta.
1-4-29	R	Ghose, DEB PROSONNO, <i>Zemindar.</i> 75, Beadon Street, Calcutta.
7-1-29	R	Ghose, THE HON'BLE MR. JUSTICE MOHIM CHANDRA, B.A. (CAL.), M.A. (CANTAB.), I.C.S., <i>Barrister-at-Law (Inner Temple), Judge, High Court.</i> 4A, Little Russell Street, Calcutta.
3-12-24	R	Ghose, SUSHIL CHANDRA, B.A., <i>Deputy Magistrate.</i> 1, Sikdarbagan Street, Calcutta.

Date of Election.		
2-4-24	R	Ghosh, K., D.T.M., D.P.H. (CANTAB.), L.M.S., <i>Medical Practitioner</i> . 45, Creek Row, Calcutta.
7-3-27	R	Ghosh, PHANINDRA NATH, M.A., PH.D., SC.D. (PADUA), F.INST.P., <i>Sir Rashbehary Ghosh Professor of Applied Physics, University of Calcutta</i> . 92, Upper Circular Road, Calcutta.
4-9-12	R	Ghosh, TARAPADA, <i>Zemindar</i> . 14, Paddapukur Street, Kidderpore, Calcutta.
1-2-26	R	Ghuznavi, SIR ABDUL HALIM, KT., M.L.A., <i>Zemindar</i> . 18, Canal Street, Entally, Calcutta.
6-8-28	R	Ghuznavi, ISKANDER S. K., <i>Zemindar and Member, Advisory Board of Industries, Government of Bengal</i> . 45, Jhowtolla Road, Calcutta (and) Dilduar, Mymensingh.
1-2-26	R	Ghuznavi, ALHADJ SIR ABDELKERIM ABU AHMED KHAN, KT., M.L.O., <i>Zemindar of Dilduar</i> . 45, Jhowtolla Road, Calcutta (and) North House, Dilduar, Mymensingh.
3-12-34	R	Gladstone, JOHN, <i>Assistant, Messrs. Gillanders Arbuthnot &amp; Co., Ltd.</i> 8, Clive Street, Calcutta.
5-3-28	R	Goopu, DWIJENDRA NATH, <i>Medical Practitioner and Landholder</i> . 5, Middleton Street, Calcutta.
7-9 10	N	*Gravely, FREDERIC HENRY, D.SC., F.R.A.S.B. Museum House, Egmore, Madras.
5-12-00	L	Grieve, JAMES WYNDHAM ALLEYNE. c/o Messrs. Coutts & Co., 440, Strand, London, W.C. 2.
4-3-35	R	Groth, EDWARD M., <i>American Consul</i> . American Consulate General, 9, Esplanade Mansions, Esplanade, Calcutta.
4-2-25	R	Guha, B. S., M.A., PH.D. (HARVARD). Indian Museum, Calcutta.
6-12-26	R	Guha, THE HON'BLE MR. JUSTICE SURENDRANATH, RAI BAHADUR, <i>Judge, High Court</i> . 20, Lansdowne Road, Calcutta.
5-3-19	N	Gupta, SIVAPRASAD. Seva Upavana, Benares City.
5-8-15	R	Gurner, CYRIL WALTER, B.A. (OXON), I.C.S., <i>Chairman, Improvement Trust</i> . 4, Theatre Road, Calcutta.
5-2-34	R	Haldar, BHARATI VIKAS, M.A., B.L., <i>Advocate, High Court</i> . 47, Haldarpara Road, Kalighat, Calcutta.
6-1-30	R	Haldar, SUDHINDRA KUMAR, M.A., I.C.S., <i>Commissioner of Excise and Salt, Bengal</i> . 241, Lower Circular Road, Calcutta.
6-1-30	F	Hamilton, SIR DANIEL MACKINNON, KT., <i>Retired Partner, Messrs. Mackinnon Mackenzie &amp; Co.</i> Balmacara, Rosshire, Scotland.
2-4 24	R	Haq, M. MAHFUZ-UL, M.A., <i>Lecturer, Presidency College</i> . 8/B, Dargah Road, Park Circus, Calcutta.
1-5-12	R	Harley, ALEXANDER HAMILTON, M.A., I.E.S., <i>Principal, Islamia College</i> . 19, Wellesley Square, Calcutta.
1-2-26	F	Harris, H. G. c/o Messrs. Martin & Harris, Ltd., <i>Rowlette Buildings</i> , 17, Prinsep Street, Calcutta.
2-4-28	R	Harris, LAWRENCE ERNEST, <i>Engineer, Manager for India, Messrs. Sulzer Brothers</i> . 4, Lyons Range, Calcutta.
5-11-19	N	Hemraj, MANYABARA RAJ GURU, C.I.E., PANDITJI. Dhokatole, Nepal.
3-2-30	F	Henderson, ALEXANDER GAVIN, B.A. (OXON). Buscot Park, Faringdon, Berks, England.
6-3-28	R	*Heron, A. M., D.SC. (EDIN.), F.G.S., F.E.G.S., F.R.S.E., F.R.A.S.B., <i>Superintendent, Geological Survey of India</i> . 27, Chowringhee, Calcutta.

Date of Election.		
7-6-11	L	*Hidāyat Hōsain, MUHAMMAD, SHAMS 'UL-'ULAMA, KHAN BAHADUR, PH.D., F.R.A.S.B. 96/2c, Collin Street, Calcutta.
1-2-26	A	Hingston, H., LT.-COL., I.M.S., M.D., <i>Late Surgeon to H.E. the Governor of Bengal.</i> England.
4-11-35	R	Hirtzel, MICHAEL ARTHUR FREDERICK, B.A. (TRINITY COLLEGE, OXFORD), <i>Mercantile Assistant, Macneill &amp; Co.</i> 2, Fairlie Place, Calcutta.
1-4-25	R	Hobbs, HENRY, MAJOR, V.D., <i>Merchant.</i> 9, Old Court House Street, Calcutta.
1-2-32	R	Holme, JAMES WILLIAM, M.A., I.E.S. (RETD.), <i>Principal, La Martinière.</i> 11, Loudon Street, Calcutta.
7-3-27	N	Hopkinson, ARTHUR JOHN, I.C.S., <i>Secretary to the Government, N. W.F. Province.</i> Peshawar, N.-W.F.P.
2-11-21	L	*Hora, SUNDER LAL, D.SC., F.Z.S., F.R.S.E., F.R.A.S.B. <i>Zoological Survey of India, Indian Museum, Calcutta.</i>
5-11-34	R	Hosain, PRINCE AFSARUL MULUK MIRZA MUHAMMED AKRAM, BAHADUR, <i>Political Pensioner and Landholder.</i> Afsar Manzil, 20, Ballygunge Circular Road, Calcutta.
6-6-23	L	*Howard, SIR ALBERT, KT., C.I.E., M.A., F.R.A.S.B., <i>Late Director, Institute of Plant Industry, Indore, and Late Agricultural Adviser to States in Central India.</i> 14, Liskeard Gardens, Blackheath, London, S.E. 3.
2-9-35	N	Howland, FELIX, <i>Professor of English.</i> Habibia College, Kabul, Afghanistan.
7-3-32	N	Hughes, ARTHUR, B.A. (MANCHESTER), <i>Indian Civil Service, Magistrate and Collector,</i> Murshidabad, Bengal.
4-5-36	N	Husain, SYED ASAF, M.A., LL.B., <i>Lawyer.</i> 3, Old Court Road, Lucknow.
6-8-34	N	Husain, SYED ATA, M.A. (CAL.), C.E. (ROORKEE), <i>Retired Superintending Engineer, Hyderabad State.</i> Mohalla Lingumpally, Hyderabad, Deccan.
6-6-23	N	*Hutton, J. H., C.I.E., I.C.S., M.A., D.SC., F.R.A.S.B. <i>Now-gong, Assam.</i>
1-2-11	L	Insch, JAMES. 18, Beechwood Avenue, Boscombe, Hants, England.
4-3-35	R	Jack, THE HON'BLE MR. JUSTICE ROBERT ERNEST, I.C.S., <i>Judge, High Court.</i> United Service Club, Calcutta.
4-2-35	N	Jaffar, S. M., B.A., <i>Author, Translator to the Judicial Commissioner, North-West Frontier Province.</i> 1508, Khudadad Street, Peshawar City, N.-W.F.P.
6-6-27	L	Jain, BALDEODAS, <i>Merchant and Banker.</i> 21, Armenian Street, Calcutta.
2-2-21	R	Jain, CHHOTE LAL, M.R.A.S. 25, Central Avenue North, Calcutta.
6-1-30	N	Jain, NIRMAL KUMAR. Devashrama, Arrah.
6-8-28	N	Jaitly, P. L., <i>Electrical Engineer, Merchant.</i> 15, Canning Road, Allahabad.
1-11-26	F	Jameson, THOMAS BLANDFORD, MAJOR, M.C., M.A. (CANTAB.), I.C.S. Claremont, Kingskerswell, S. Devon, England.
6-5-25	R	Jatia, SIR ONKAR MULL, KT., O.B.E., <i>Merchant.</i> 2, Rupchand Roy Street, Calcutta.
4-2-29	R	Jenkins, WALTER ALLEN, D.SC. (SHEFFIELD), I.E.S., <i>Principal, David Hare Training College.</i> United Service Club, Calcutta.



Date of Election.		
1-11-11	L	<b>Kamaluddin AHMAD, SHAMS-UL-'ULAMĀ, M.A., I.E.S., Principal, Krishnagar College. Krishnagar, Nadia.</b>
6-11-33	R	<b>Kavyatirtha, RAM DHAN, Pundit. 55, Surendranath Banerjee Road, Calcutta.</b>
4-5-10	L	<b>*Kemp, STANLEY W., B.A., D.SC., F.R.E., F.R.A.S.B. 'Discovery Expedition', 52, Queen Anne Chambers, Dean Farrar Street, London, S.W. 1.</b>
2-5-30	N	<b>Kenny, DICK EDWARD COURTENAY, LT.-COL., I.A., Deputy Commissioner, Tavoy. Burma.</b>
2-12-29	N	<b>Khan, MATUR RAHMAN, Khas Mahal Circle Officer. 27, Panchbhaighat, Dacca.</b>
3-12-24	R	<b>Khan, REZAUR RAHMAN, M.A., B.L., Deputy President, Bengal Legislative Council. 28, Convent Road, Entally, Calcutta.</b>
6-5-25	R	<b>Khanna, VINAYEK LAL, M.R.A.S., Merchant. 137F, Balaram Dey Street, Beadon Street P.O., Calcutta.</b>
2-8-26	R	<b>Khettry, BENIMADHO, Proprietor, Messrs. Gouri Shanker Khettry, Landholders, Bankers and Merchants. 15, Paggiyapatti, Barabazar, Calcutta.</b>
2-11-25	F	<b>Kimura, R. (Ko-Shi), Principal, College Department of Rishso University. Oseki Machi, Tokyo, Japan.</b>
5-2-34	N	<b>Kirby, WALTER, B.Sc., Inspector of Mines in India Dhanbad, E.I.R.</b>
4-11-35	R	<b>Klebe, ANINA, née BRANDT, PH.D. (GREIFSWALD, GERMANY), Psychologist. 14/1, Sudder Street, Calcutta.</b>
1-3-26	R	<b>Kramrisch, STELLA (MRS.), PH.D., Lecturer in Ancient Indian History (Fine Arts), Calcutta University. 57, Ballygunge Circular Road, Calcutta.</b>
3-9-34	R	<b>Krishnan, K. S., D.Sc., Mahendralal Sircar Professor of Physics, Indian Association for the Cultivation of Science. 210, Bowbazar Street, Calcutta.</b>
6-11-33	A	<b>Krishnan, M. S., M.A. (MADRAS), PH.D. (LOND.), A.R.C.S., D.I.C. (LOND.), Assistant Superintendent, Geological Survey of India. 27, Chowringhee, Calcutta.</b>
2-4-28	R	<b>Kumar, KUMAR KRISHNA, M.A., B.L., Zemindar and Banker. 31 &amp; 31-1, Burtolla Street, Calcutta.</b>
7-3-23	R	<b>Labey, GEORGE THOMAS, M.C., Bengal Pilot Service. United Service Club, Calcutta.</b>
4-2-35	R	<b>Lal, RAM BIHARI, M.B., B.S., D.P.H., D.T.M. &amp; H., D.B., Professor of Vital Statistics and Epidemiology, All-India Institute of Hygiene and Public Health. 21, Chittaranjan Avenue, Calcutta.</b>
6-3-89	L	<b>*La Touche, THOMAS HENRY DIGGES, M.A., F.G.S., F.R.A.S.B. 230, Hills Road, Cambridge, England.</b>
5-2-34	R	<b>Law, BHABANI CHURN, Merchant, Zamindar and Artist. 223, Cornwallis Street, Calcutta.</b>
5-8-14	L	<b>LAW, BIMALA CHARAN, M.A., B.L., PH.D., F.R.HIST.S. 43, Kailas Bose Street, Calcutta.</b>
1-2-11	R	<b>LAW, NARENDRA NATH, M.A., B.L., PH.D. 96, Amherst Street, Calcutta.</b>
4-2-35	R	<b>LAW, PARBUTTY CHURN. 223, Cornwallis Street, Calcutta.</b>
1-7-14	R	<b>LAW, SATYA CHURN, M.A., B.L., PH.D., F.Z.S., M.B.O.U. 50, Kailas Bose Street, Calcutta.</b>
3-9-34	R	<b>Ledrus, MICHAEL, Professor in Divinity, Lecturer at the Gregorian University, Rome; Member of the Society of Jesus, Editor, 'The New Review'. St. Xavier's College, 30, Park Street, Calcutta.</b>

Date of Election.		
7-6-26	R	Lemmon, RICHARD DENNIS, <i>Merchant</i> . c/o Messrs. Martin & Harris Ltd., 17, Prinsep Street, Calcutta.
1-6-31	R	Lort-Williams, THE HON'BLE MR. JUSTICE JOHN, K.C., <i>Barrister-at-Law, Judge, High Court</i> . 227/1, Lower Circular Road, Calcutta.
5-7-26	A	Lyne, HOWARD WILLIAM, I.C.S. Khulna, E.B.R.
2-8-05	L	*McCay, DAVID, LT.-COL., I.M.S., M.D., B.OH., B.A.O., M.R.C.P., F.R.A.S.B. c/o The Standard Bank of S. Africa, Cradock, Cape Province, S. Africa.
1-3-26	R	McKay, JOHN WALLACE. c/o Messrs. Duncan Bros. & Co., Ltd., 101, Clive Street, Calcutta.
11-1-03	L	*MacLagan, SIR EDWARD DOUGLAS, K.C.S.I., K.C.I.E., F.R.A.S.B. 39, Egerton Terrace, London, S.W. 3.
5-3-24	R	McPherson, JAMES. c/o Messrs. Begg Dunlop & Co., Ltd., 2, Hare Street, Calcutta.
7-6-16	N	Mahajan, SURYA PRASAD. Murarpur, Gaya.
3-3-20	R	Mahalanobis, P. C., M.A., B.SC., I.E.S., <i>Professor, Presidency College</i> . 210, Cornwallis Street, Calcutta.
1-3-11	R	Mahtab, SIR BIJAY CHAND, K.C.S.I., I.O.M., MAHARAJA-DHIRAJA BAHADUR OF BURDWAN. 6, Alipur Lane, Calcutta.
3-2-30	N	Mahtab, UDAY CHAND, B.A., <i>Maharaj Kumar of Burdwan</i> . The Palace, Burdwan.
6-2-24	R	Mahindra, K. C., B.A. (CANTAB.). Messrs. Martin & Co., 12, Mission Row, Calcutta.
9-6-20	R	*Majumdar, NANI GOPAL, M.A., F.R.A.S.B. <i>Archæological Survey of India, Indian Museum, Calcutta</i> .
2-2-16	R	Majumdar, NARENDRA KUMAR, M.A., <i>Professor, Calcutta University</i> . 3, Government Place, West, Calcutta.
4-6-13	N	Majumdar, RAMESH CHANDRA, M.A., PH.D., <i>Professor, Dacca University</i> . Ramna, Dacca.
5-5-30	A	Mallam, G. L., CAPTAIN, I.A., <i>Census Superintendent</i> . Peshawar, N.-W.F.P.
4-11-29	R	Mallya, BANTWAL GANAPATHY, MAJOR, I.M.S., F.R.C.S.E. <i>Civil Surgeon</i> . Howrah
7-9-36	N	Mandhata, H. C., M.A. (ALLAHABAD), <i>Teacher, formerly Lecturer in History, Agra College</i> . Ghaziabad, Meerut.
6-2-18	L	*Manen, JOHAN VAN, C.I.E., <i>Officier de l'Instruction Publique</i> , F.R.A.S.B. 6, Temple Chambers, 6, Old Post Office Street, Calcutta.
5-6-01	F	Mann, HAROLD HART, D.SC., M.SC., F.I.C., F.L.S. <i>Woburn Experimental Station, Aspley Guise, Bedfordshire, England</i> .
6-1-30	N	Martin, M. F. C., CAPT., R.E. c/o The Garrison Engineer, Mingladon, Burma.
5-5-30	A	Matthias, OWEN GARDINER, <i>Managing Director, Messrs. Smith Stanistreet &amp; Co., Ltd.</i> Stanistreet House, 18, Convent Road, Entally, Calcutta.
2-1-28	N	Mello, FROILANO DE, COLONEL, <i>Director-General of Medical Services in Portuguese India, Professor of Parasitology</i> . Nova Goa.
5-11-84	L	*Middlemiss, CHARLES STEWART, C.I.E., F.R.S., B.A., F.G.S., F.R.A.S.B. <i>Aviemore, Crowborough, Sussex, England</i> .
1-2-26	N	*Mills, JAMES PHILIP, I.C.S., M.A. (OXON), J.P., F.R.A.S.B., <i>Deputy Commissioner</i> . Kohima Naga Hills, Assam.
5-6-12	N	Misra, CHANPA RAM, B.A., RAI BAHADUR, PANDIT, <i>Diwan, Chhatarpur State</i> . Bundelkhand, C.I.